

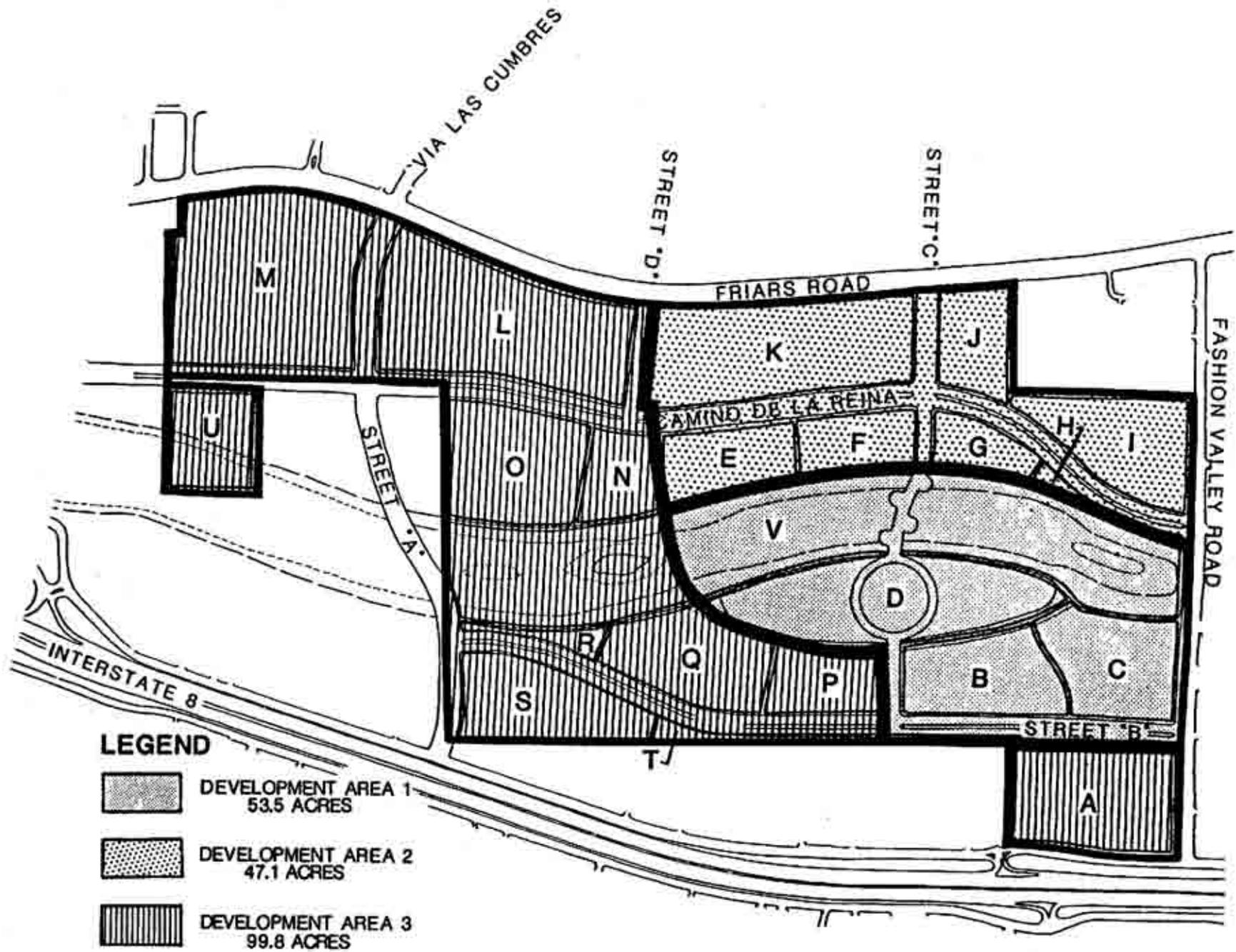
LEVI-CUSHMAN SPECIFIC PLAN

Implementation Guidelines

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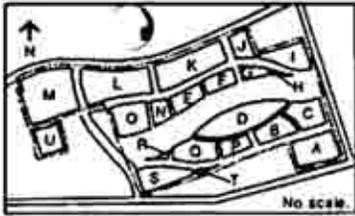


LEGEND

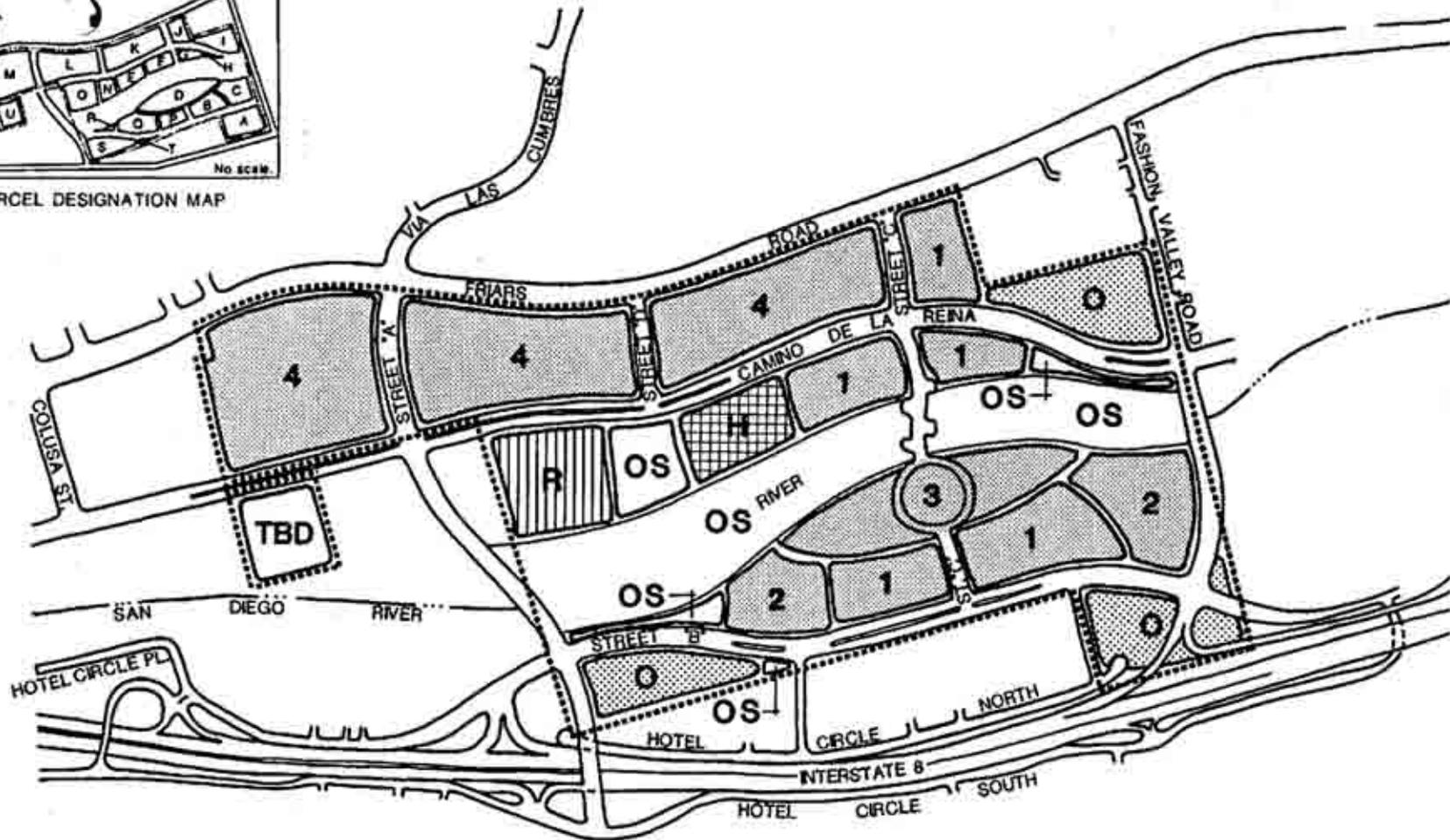
-  DEVELOPMENT AREA 1
53.5 ACRES
-  DEVELOPMENT AREA 2
47.1 ACRES
-  DEVELOPMENT AREA 3
99.8 ACRES

**LEVI - CUSHMAN
SPECIFIC PLAN**

**KEY TO
PARCEL LOCATIONS**



PARCEL DESIGNATION MAP



LEGEND



COMMERCIAL-HOTEL



COMMERCIAL-OFFICE



RESIDENTIAL



MIXED USE-OFFICE/RETAIL



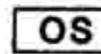
MIXED USE-HOTEL/RETAIL



MIXED USE-OFFICE/RESIDENTIAL/RETAIL



MIXED USE-RESIDENTIAL/RETAIL



OPEN SPACE



TO BE DETERMINED



No scale

**LEVI - CUSHMAN
SPECIFIC PLAN**

**SUMMARY
OF LAND USES**

I. GENERAL CRITERIA

A. SUBMISSION REQUIREMENTS

1) Consistency - All development within the Levi-Cushman Specific Plan area must be consistent with the Levi-Cushman Specific Plan (LCSP) and these Implementation Guidelines (IG). If inconsistencies or ambiguities arise between text and graphics in either of these documents, the more restrictive interpretation shall apply unless otherwise approved by the Planning Director.

2) Processing - Plans for development within the project must be processed under the requirements and procedures of the City of San Diego Planned Commercial Development (PCD) or Planned Residential Development (PRD) regulations (Section 101.0910 and 101.0900).

3) Underlying Zoning - For development criteria not established by the Specific Plan or Implementation Guidelines, all PCD applications shall rely on applicable provisions of the City of San Diego "CA" ("Area Shopping Center") zoning regulations. For development criteria not established by the Specific Plan or Implementation Guidelines, all PRD applications shall rely on applicable provisions of the R-1000 zoning regulations. Wherever discrepancies occur between zone regulations and the LCSP/IG, the Specific Plan and Implementation Guidelines shall prevail.

4) Minimum Size Submittal - The minimum area for which a PCD/PRD can be submitted is a Development Area, as identified on the Key to Parcel Locations, LCSP Figure 2.2.

5) Development Summary - Development applications must identify the Average Daily Trips (ADT), residential units, hotel rooms, and square feet of development associated with each land use type within the Development Area being processed, as well as a summary of ADTs, units, rooms, and square footages of previously-approved and yet-to-be-approved Development Areas.

6) Programs to Accompany Initial Submittal - The first planned development application shall be accompanied by a series of descriptive programs which refine guidelines and criteria appearing in the LCSP. These programs are:

Architectural Design

Streetscape Planting

Streetscape Design

Street Name Program

Sign Program

Floodway Channelization

Earth Moving and Grading,

Initial submittals shall contain basic criteria applicable throughout the project area, with specific details on application within the accompanying PCD or PRD.

7) Engineering Review - In addition to those approvals normally required from the City Engineer as part of the LCSP development process, the following shall also apply:

a) Prior to approval of the first Planned Development within the Levi Cushman Specific Plan area, the preliminary grade and alignments for all streets within the entire LCSP area shall be approved by the City Engineer; and

b) The street system proposed for the project must be designed to the satisfaction of the City Engineer per the drawing entitled "Restudy Overlay to Study Plan #1" dated June 29, 1987, or an amendment thereto which is agreeable to the City Engineer.

8) Minor Changes - Some changes to the project design described within the Plan are anticipated as a normal consequence of detailed planning and engineering. All plans will be subject to the review of the Planning Director and City Engineer to assure conformance with applicable public policies and standards. As well, the Planning Director may approve minor adjustments in parcel dimension, lot coverage, road alignment, river channel alignment, and development area acreage without a specific or community plan amendment so

long as those adjustments are in substantial conformance with and meet the spirit and intent of the LCSP and IG.

B. LAND USE AND INTENSITY CONTROLS

1) Mixed Use Requirements - Each of the three Development Areas (DA1, DA2, and DA3) shall contain at least three of the following land uses: residential, hotel, retail, office. No single land use shall account for more than 65 percent of the square footage within that Development Area.

2) Phasing - Phasing must be established within each Development Area so that no more than 80 percent of the allowable square footage of any land use can be approved unless construction commences on at least two other land uses. Maximum square footages are shown in Table 2.1 of the LCSP.

3) Room/Unit/SF Maximums - Development shall not vary more than 15 percent from the following levels of use in each

	RESIDENTIAL UNITS	HOTEL ROOMS	000'S OF SQ FEET OF DEVELOPMENT	
			RETAIL	OFFICE
DA 1	60	500	100	500
DA 2	300	250	50	691
DA 3	<u>262</u>	<u>250</u>	<u>50</u>	<u>1391</u>
PROJECT TOTAL	1329	1000	200	2582

Development Area (DA). An increase in development in one DA shall be balanced by a reciprocal decrease in use in another DA to assure that project development totals remain unchanged.

4) **ADT Maximums** - Each Development Area within the project shall not exceed by more than 5 percent the following ADT levels, and in no case shall the 200-acre LCSP area generate more than 67,000 ADT:

- DA 1 17,380
- DA 2 17,906
- DA 3 31,669 (Includes 2700 trips as LRT allowance; see IG Section II/G4f for conditions)

5) **Floor Area Ratio** - The Floor Area Ratio (FAR) for the entire project is 0.6. Maximum FAR's within each Development Area are:

- DA 1 0.50 (1.1 million square feet/53 acres)
- DA 2 0.65 (1.3 million square feet/47 acres)
- DA 3 0.70 (2.9 million square feet/100 acres)

C. PROJECT THEME ELEMENTS:

Each major theme element noted here shall be separately evaluated for conformance with LCSP policy and development criteria.

1) **The Island** - Parcel D shall be designed as an island and shall serve as the prime activity center for retail, office and restaurant uses. It is to be the focus of public use for the entire project.

2) **Pedestrian Bridges** - A pedestrian bridge shall be designed to span the San Diego River and link the north side of the river to the island. The bridge is to be lined with temporary and varied retail uses such as food and flower kiosks. A series of small bridges shall be designed to cross the artificial canal created south of the island and link with development south of the river.

3) **River Channel and Buffer** - The San Diego River channel corridor shall be designed to accommodate a 49,000 cfs flood level and significantly enhanced as a wildlife and water-fowl preserve. Human use of and direct physical access to the river is prohibited. A continuous river buffer shall be provided immediately adjacent to both sides of the channel.

4) **Open Space Network** - All major open space use areas, including pedestrian and bicycle paths, shall be linked to one another throughout the project area. Pedestrian and bicycle paths shall link with the community-wide trail system.

5) **Architectural Consistency** - All development plans shall read as part of a single comprehensive project. Consistent and compatible architectural design, colors, finishes, signage and landscaping shall be used.

6) **Sloping Heights** - Height policies permit tall buildings at the periphery of the project and gradually decreasing building heights as development moves closer to the river. This echoes the natural character of the Mission Valley setting.

7) Continuity of Edges - At the perimeter of the LCSP project area, development including but not limited to the river buffer, pedestrian/bike paths, and streetscape furnishings shall be continuous and/or functionally harmonious with existing or approved uses on adjacent parcels.

8) View Corridors - The San Diego River shall be the central focus and view corridor for the project. Other view corridors shall be provided from pedestrian and vehicular ways.

9) Theme Tower - A dramatic theme tower is proposed for the island. It shall serve as the major focal point for the project and will direct pedestrian usage to the island center. The theme tower is not subject to height limit imposed on island development and its height will be established during the PCD review of Development Area 1.

10) Transportation Center - Within the northeast portion of the LCSP area, a transportation center will focus public transit (stops for LRT, buses), private transit (intra-valley shuttle, taxi cabs, jitneys), traveler-oriented services (visitor accommodations, restaurants, ticket booths), and vehicle parking facilities. Pedestrian walkways and bike paths shall connect the transportation center with all other portions of the project.

II. DEVELOPMENT CRITERIA

A. HEIGHTS

Throughout the project, building profiles are generally designed to slope toward the river. See Height Zones, LCSP Figure 3.1, and height envelopes diagrammed on Parcel Summary Maps. Building heights along the river channel will generally be one or two stories, then step up as they move away from the river. Three height zones are applied within the project:

- 1) **Perimeter Zone** - Within this zone, heights range from a maximum of 250 feet at the perimeter of the project to a maximum of 140 feet. Parcels S and A have only a 250 foot height maximum and do not have sloping height requirements since an interchange with Interstate 8 will be constructed on an as-yet unknown portion of these parcels. A simple height maximum is therefore established to preserve development options.
- 2) **Mid Zone** - Heights range from a maximum of 140 feet to a maximum of 42 feet. The maximum height of 140 feet extends across 50 percent of the mid zone parcels between Camino De La Reina and the river and between Street B and the canal. From this 50 percent point, the height envelope slopes down to 42 feet along the river and canal.
- 3) **Low Zone** - Heights are permitted up to a maximum of 42 feet, except for the theme tower whose height will be established during the PCD review of DA 1.

B. LOT COVERAGE MAXIMUMS AND LANDSCAPING MINIMUMS

- 1) **Maximum Coverage** - The portion of a parcel which may be covered with structural development shall vary based on permitted heights:
 - a) **Perimeter Zone** - No more than 40 percent of the gross area of each parcel within the Perimeter Zone may be covered by structural development.
 - b) **Mid Zone** - No more than 50 percent of the gross area of each parcel within the Mid Zone may be covered by structural development.
 - c) **Low Zone** - No more than 60 percent of the gross area of each parcel within the Low Zone may be covered by structural development.
- 2) **Minimum Landscaping** - The area within each parcel which is restricted from coverage by structural development shall be inversely proportional to the height (i.e., Perimeter Zone - 60 percent; Mid Zone - 50 percent; Low Zone - 40 percent). This area shall be fully landscaped with living plant material and permanently maintained, except that driveways, urban plazas, street furniture, active and passive recreational uses, and pedestrian and/or bike paths shall be permitted.

C. SETBACKS

1) Minimum Requirements -

- a) From the top of the river channel (typically the edge of the floodway) - 50 feet except on the Island where it shall be 30 feet.
- b) From the top of the canal - 20 feet.
- c) From Friars Road - 50 feet
- d) From Fashion Valley Road, Camino De La Reina, Street A, Street B, Street C (except between the river and the canal) and Street D - 30 feet.

On north-south public streets designated as view corridors, setbacks shall be increased by two feet for each story that the building exceeds three stories in height to promote views to and from the river corridor. With the approval of the Planning Director, a building step-back may be substituted in lieu of this increase in setback.

- e) From all internal public streets - 20 feet.
- f) From adjacent parcels - 20 feet except when a parcel is developed in conjunction with an adjacent parcel at which time the required setback is 0 feet.

2) Measurement - All setbacks from public streets shall be measured from the property line.

3) Permitted Use - All setbacks shall be fully landscaped with living plant material and permanently maintained, except that driveways, urban plazas, street furniture, picnic areas, viewing areas, hiking and jogging trails, and pedestrian and/or bike paths shall be permitted.

D. ARCHITECTURE

An Architectural Design Program shall accompany the first planned development application and shall be based on the LCSP Urban Design and Development Policy, Section 3.0. The Architectural Design program shall contain design criteria for the entire project area regarding:

- Architectural character, including overall design, scale, massing, color, and finish;
- Functional relationships between buildings and exterior spaces; and
- Construction materials.

At the time applications are submitted for PCD/PRD processing for each DA, architectural site plans (plan views, elevations, landscaping) shall be provided for each parcel.

E. SITE PLANNING FOR VIEWS

1) Orientation - Buildings shall be configured to optimize river views.

2) **Grouping** - Groups of buildings should be sited to maximize landscaped open space areas and preserve view corridors. Development along Friars Road shall not be so closely spaced as to create a block wall effect prohibiting views into the project and acting to visually enclose the street.

3) **View Corridors and Sight Lines** - Views toward the river shall be provided throughout the project based on the identification of View Corridors, LCSP Figure 3.7.

a) **North-South Street View Corridors** - Ground level view corridors shall be provided along all north-south public streets to the river.

b) **Through-Parcel View Corridors** - At least two ground level view corridors shall be provided between Friars Road and the river which permit views through parcels. One of these views will be provided through Parcels L and O, and another through Parcels K and E or K and F. Another view corridor shall be designed from Interstate 8 through Parcels A and C or Parcels A, B, and D into the river.

c) **Sight Lines** -

Views shall be provided into the site from Interstate 8 and hillsides above Friars Road.

Views shall be provided from Fashion Valley Road, Camino De La Reina, and Street A to the proposed theme tower and island.

Views shall be provided from the transportation center at Camino De La Reina and Street C to the river corridor.

F. OPEN SPACE NETWORK

The LCSP open space network is composed of the river corridor, river buffer, pedestrian bridges, park and open use areas, floodway transition areas, theme entries, project open space, pedestrian paths, and bikeways.

1) General Requirements

a) **Construction and Maintenance** - The landowner and/or project tenants shall bear financial responsibility for constructing the open space network. Funds for maintenance shall be guaranteed through creation of one or more maintenance districts for areas where public access or open space easements are granted. Project open space and private recreational areas shall be constructed and maintained by owners' associations or by individual owners or tenants. Landscaping of all raised street medians and areas between curbs and sidewalks which lie within public rights-of-way will be provided by the developer and maintained through a maintenance district.

b) **Recreational Emphasis** - Recreational uses shall be provided within private developments and may include swimming pools; tennis, basketball, volleyball, handball, shuffleboard, and badminton courts; children's play areas; and picnic facilities.

c) Linkage - Private outdoor recreation and urban plaza areas must be physically or visually linked to a project-wide open space system. Open space areas between buildings shall be developed into landscaped links to the major open space areas.

d) Clustering - Structures should be clustered to maximize open spaces and open use areas.

2) River Channel

a) Design - The first project development application shall be accompanied by a detailed design for channelizing the floodway of the San Diego River between Fashion Valley Road and Street A with a natural appearing waterway and vegetated slope areas. The floodway channel shall be capable of conveying a peak discharge of 49,000 cfs without raising the calculated surface of the existing flood level either upstream or downstream of the project and shall be designed to function with or without development of adjacent upstream or downstream properties. See Channel Design Cross Sections, LCSP Figure 4.2

b) Flood Control Compliance - River channel design shall be reviewed for compliance with applicable flood control regulations and policies by the Floodway Management Section of the City of San Diego Engineering and Development Division.

c) Revegetation/Wetland Program Compliance - The Riparian Revegetation Program included within these Im-

plementation Guidelines shall govern the improvement, maintenance, management, and monitoring of wetland habitat within the channelized portion of the San Diego River which lies in the LCSP project area. All mitigation conditions identified within the LCSP EIR shall apply to this project, including requirements for use of rip-rap and synthetic mesh netting on portions of the flood control channel to minimize erosion and ensure slope stability, and mitigation to prevent runoff from the entire site from entering the flood control facility. Detailed conditions are specified within the EIR.

d) Open Space Easement - An open space easement shall be granted for that area of the San Diego River covered by the first phase of construction of the channelized floodway at the time of recordation of the first final map for Development Area 1. An open space easement shall be granted for that area covered by the second phase of construction of the San Diego River channelized floodway at the time of recordation of the first final map for Development Area 3.

3) River Buffer

a) Location and Components - A river buffer with a width of 25 feet shall be located immediately adjacent to the top of the river channel (typically the San Diego River 100-year floodway), and shall include a vegetative barrier no less than five feet wide with an understory growth no greater than four feet high which denies access into the river. The river buffer may also include a pedestrian and

bike path, landscaped areas, and passive recreational areas. Within the first 20 feet of the river buffer, as measured from the top of the channel, only native vegetation shall be planted. Since the setback requirement along most of the river is 50 feet, it is expected that portions of this setback will be designed to merge with and visually appear to be an extension of the buffer. Therefore, flexibility in the design of the buffer shall be encouraged to assure a variety of buffer configurations. See River Cross Section and Buffer, LCSP Figure 3.3, and Typical Designs Adjacent to the Buffer, LCSP Figure 3.4.

b) Vegetative Barrier -

- Plants within the vegetative barrier shall be limited to those identified in the On-Site Plant Matrix, LCSP Table 3.3, as suitable for barrier vegetation. Additions may be made to this plant list at the discretion of the Environmental Quality Division.
- A break in the plant overstory shall be provided along at least 20 percent of the barrier to permit views into the river. These view breaks shall be aligned and coordinated with view corridors, but in no case shall the view break be greater than 50 linear feet.

c) Pedestrian and Bicycle Path - A primary pedestrian path and a bicycle path shall be included within the river buffer and/or within the 50-foot setback from the river, designed to standards described in Sections F9 and F10 below. In no case, however, shall the paved area devoted

to a combined pedestrian/bicycle path within the buffer exceed 10 feet in width.

d) Public Access Easement - A public access easement shall be granted for the river buffer and the pedestrian and bicycle paths located within 50 feet of the river channel at the time of recordation of the first final map for each Development Area.

4) Primary Pedestrian Bridge

a) Location - A bridge oriented primarily for pedestrian use shall continue the right-of-way for Street C, span the San Diego River, and link the transportation center to the island.

b) Use - The bridge shall be designed for pedestrian use but shall also accommodate limited public transit and emergency vehicle access to the island. Retail commercial uses shall be permitted on the bridge so long as they are mobile in character, directed to pedestrians using the bridge, and include but are not limited to temporary food, flower, and general merchandise vendors.

c) Design - The traveled way of the bridge shall not exceed a width of 30 feet and shall be designed to provide pedestrian, limited transit, and emergency vehicle access. Up to two commercial nodes shall be permitted on each side of the bridge adjacent to the traveled way. Each node shall add no more than 20 feet to the width of the bridge nor have a net use area greater than 800 square feet. At no

point shall the maximum overall width of the bridge exceed 50 feet. The bridge shall be designed with the minimum practical number of vertical supports.

5) Parks and Open Use Areas

a) Location and Use - Parcels N, H, R, and T, or other parcels providing no less than six acres with at least 1700 linear feet adjacent to the river channel, shall be designated for park and open use.

b) Special Treatment Areas - Parcels designated for Park and Open Use which lie adjacent to the river channel shall employ landscaping which transitions from native riparian plants within the vegetative barrier and buffer to ornamental vegetation. Use of meandering pedestrian and bike paths is appropriate within Special Treatment Areas. See Special Treatment Areas, LCSP Figure 4.4.

c) Public Access Easement - A public access easement shall be granted for Park and Open Use Areas which lie within a particular Development Area at the time of recordation of the first final map of that Development Area.

6) Floodway Transition Areas

a) Location and Use - Overflow from a 100 year storm is expected west of Fashion Valley Road adjacent to the San Diego River channel. Within these Floodway Transition Areas, no uses shall be permitted which impede the flow of water during flood conditions. Permitted uses in-

clude but are not limited to theme entry areas, parks, parking areas, roads, pedestrian paths, bikeways, playing fields, golf courses, par courses, picnic areas, rest/view areas, and similar recreation uses. See Special Treatment Areas, LCSP Figure 4.4.

b) Compliance - Uses proposed within Floodway Transition Areas shall be reviewed for compliance with applicable flood control regulations by the Floodway Management Section of the City of San Diego Engineering and Development Division.

7) Theme Entries

a) Location and Use - Ten sites are designated within the LCSP area which are to serve as landscaped entries into the project. Entries shall announce and enunciate dominant themes of the development with monumentation, vegetation, and signing. Theme entries may include fountains, pools, or other water elements. See Theme Entry Hierarchy, LCSP Figure 3.12.

b) Types - Three types of theme entries are designated.

- A *major theme entry* includes monumentation and is measured by a radius of 120 feet from the corner where the entry is located.
- A *secondary theme entry* incorporates some water or monument features and is measured as a radius of 90 feet from the corner where the entry is located.

- A *minor theme entry* includes monument features and is measured as a radius of 45 feet from the entry corner.

8) Project Open Space

a) Recreational Canal

Location and Design - A privately constructed and maintained artificial canal bordering the south side of the island shall visually but not literally connect to the river channel. Bridges over the canal will link the island to nearby development.

Use - Recreational use of the canal may include but is not limited to paddleboats and water taxis.

Water Quality - A water quality monitoring and maintenance program for the closed-circulation canal system shall accompany plans for development of the canal.

b) Individual Parcels

Minimum Area - At least ten percent of the buildable area of each parcel (the development area as defined on Parcel Summary Maps) shall be devoted to outdoor space intended for human use and/or relaxation. This area is considered free of structural development and shall be included when calculating the percentage of parcel area necessary to satisfy the Minimum Landscaping requirement of IG Section II/B2.

Uses - Project open space includes but is not limited to courtyards, plazas, promenades, seating areas, recreational areas, pedestrian and bicycle paths, parks, viewing areas, children's play areas, and picnic areas.

9) Pedestrian Paths

a) Location - Pedestrian paths shall be located throughout the project area, connect all uses to one another, and link to the community-wide pedestrian and public transit systems. Development adjacent to the river channel shall not directly abut the primary pedestrian path located within the required setback from the river. Safe and convenient pedestrian movement shall be provided from parking areas to surrounding projects. All uses must have direct pedestrian links into open space areas. See Pedestrian Circulation System, LCSP Figure 3.5.

b) Design Standards -

Width When Adjacent a Public Street - Widths of pedestrian paths located within a public street right-of-way shall be determined by the classification of the adjacent street and shall be separated from the street by a landscaped strip.

- When adjacent to a major street, the pedestrian path shall be 10 feet wide and the landscaped strip 8 feet wide.

- When adjacent to a four lane collector street, the pedestrian path shall be 8 feet wide and the landscaped strip 6 feet wide.
- When adjacent to a two lane street, the pedestrian path shall be 6 feet wide and the landscaped strip 5 feet wide.

Widths When Not Adjacent a Public Street - Widths of pedestrian paths which lie outside a public street right-of-way shall be no less than 6 feet wide except when they occur in the river buffer. While the pedestrian path along the river will be at least 10 feet wide, when it is located within the river buffer, the paved surface area must not exceed 10 feet in width.

Lighting - Primary and secondary pedestrian paths shall have adequate lighting and signing to provide for the safety of users during nighttime hours.

Gradient - All primary pedestrian paths shall have adequate gradients for handicap usage, per requirements of Title 24.

Crossings - On-grade crossings shall be developed at major street intersections in accordance with applicable City standards.

10) Bikeways

a) **Location -** Bikeways shall be located throughout the project area, connect uses to one another, and link to the community-wide bikeway system designated on Friars Road. See Bikeways, LCSP Figure 3.6.

b) **Design Standards -**

Bicycle Paths - Bicycle paths are two-way facilities separate from roadways. When designed exclusively for bicycles, paths shall have a width of eight feet with a two-foot shoulder on either side. A minimum eight-foot vertical clearance to obstructions shall be provided at the outside edge of the bike path. When a bicycle path is combined with a pedestrian path, it shall be ten feet wide with the two-foot horizontal and eight-foot vertical clearance required only on one side of the path. See Typical Designs Adjacent to the Buffer, LCSP Figure 3.4.

Bicycle Lanes - Bicycle lanes are striped or marked lanes in the roadway designated for preferential one-way use. Bicycle lanes shall be six feet wide. See Typical Bikeway Cross Sections, LCSP page 39.

Bicycle Routes - Bicycle routes are signed bikeways shared with pedestrian or motor vehicles with no specially marked lane. Widths of routes vary based on vehicular traffic and road conditions.

c) **Conformance** - At the time of construction, bikeway signs, markings, traffic control devices, etc., shall conform to the requirements of the MVCP bikeway design standards.

d) **Bike Racks** - Commercial and residential buildings shall provide secure bike racks.

G. CIRCULATION

1) Integrated System

An integrated circulation system shall be provided in the LCSP project area which accommodates bicycles, buses, Light Rail Transit (LRT), and both private and commercial vehicles.

2) Transportation Center

a) **Location and Use** - A transportation center shall be developed within the LCSP project which includes public transit stops, services for travelers, and parking facilities. Proposed at the intersection of Parcels F, G, J, and K, the transportation center will be the LRT station within the project. See LRT/Transportation Center, LCSP Figure 3.8.

b) **Timing** - Design of the Transportation Center shall be submitted with the planned development application for DA 2.

c) **Architectural Integration** - The transportation center shall be integrated into the architectural design of development on Parcels F, G, J, and K.

d) **Below Grade Access** - Concept designs indicate the LRT will run below the Street C intersection at Camino De La Reina.

3) Public Transit/Bus

a) **Route Location** - Friars Road will be the major bus and/or shuttle route serving the project area. Final determination of bus stop locations must be made in conjunction with MTDB. See Mass Transit, LCSP Figure 3.9.

b) Bus Stop Design -

- Bus stops shall be integrated into or constructed as part of pedestrian areas, urban plazas, and LRT and shuttle stops for the convenience of transit patrons and to provide shelter from harsh weather.
- Bus stops shall be designed to maximize security features and located close to traffic signals and pedestrian crosswalks.
- Bus stops shall be properly signed to be readily identifiable to pedestrian and bus passengers.

4) Public Transit/LRT

a) Location - The light rail transit route through the project is proposed within the Camino De La Reina right-of-way. See Vehicular Access and Circulation, LCSP Figure 5.4.

b) Right-of-Way Reservation - A 35-foot wide right-of-way will be reserved for the LRT for a 15 years period at the time of recordation of the first final map in DA2. An extension of up to 5 years will be provided if the LRT is not constructed within the 15 year period but it is shown that substantial progress on implementation has been made.

c) Station Reservation - A portion of the transportation center will be reserved for an urban LRT station for a 15 year period at the time of recordation of the first final map in DA2. An extension of up to 5 years will be provided if the LRT is not constructed within the 15 year period but it is shown that substantial progress on implementation has been made. A maximum 60-foot by 360-foot right-of-way reservation for the station will be provided.

d) Right-of-Way and Station Dedication - Dedication of a right-of-way for the LRT trackage and station shall take place at the request of MTDB upon commencement of construction of the Mission Valley LRT only if the final alignment of the LRT has been approved by the Metropolitan Transit District through the LCSP project area. The precise dedication of the LRT right-of-way will

depend on final engineering and design. In no event shall the right-of-way be greater than then 35 foot reservation. Any portion of the original reservation which becomes excess after the final engineering and design shall revert back to the LCSP project.

e) LRT Track and Station Construction Costs - The cost of initial construction of the LRT trackage and the LRT station lying within the LCSP project area will be borne by LCSP area owners and/or tenants. At their option, owners and/or tenants may construct these facilities using plans approved by MTDB and the City Engineer.

f) ADT Adjustment - Because the reservation and dedication of the LRT right-of-way and station will have a positive impact by reducing traffic in Mission Valley, the LCSP project shall receive an allowance of 2700 ADT to be applied in DA3 in exchange for said reservation and dedication. This will permit a total of 31,700 ADT in DA3.

5) Auto/Truck Circulation

a) Street Classification - Street classifications are as proposed in Recommended Street Classifications/West Mission Valley, LCSP Figure 5.7.

b) Street Design - Street section design shall be as shown in Typical Street Sections, LCSP Figure 3.10.

c) **Emergency Access** - Emergency service vehicles must have complete access to all structures and adequate vehicular turning radii in areas of public concentration.

6) **Parking**

a) **Street Parking** - Only off-street parking shall be permitted within the LCSP project area. On-street parking is prohibited.

b) **Structured Parking** - At least 75 percent of all parking required for a project shall be accommodated in architecturally- integrated parking structures.

c) **Island Parking** - At least 50 percent of parking required for development on the island shall be met by parking facilities off the island. Those facilities shall be located on Parcels F, G, P, and B. At least 50 percent of the parking required for development on the island - whether provided on or off the island - shall be accommodated in parking structures.

d) **Consolidated Parking Areas** - Consolidated parking areas as proposed within the Mission Valley Community Plan shall be developed within the LCSP project area.

e) **Interconnections** - Parking areas and parking structures should be interconnected with one another when feasible.

f) **Access** - Large parking areas of over 120 cars should feed off internal project streets.

g) **Loading/Unloading Bays** - Off-street loading and unloading bays shall be provided.

h) **Perimeter Landscaping** - Perimeter of parking garages and surface parking areas shall be screened with landscaping. See Landscaping Design, IG Section II/H3d.

i) **Surface Parking Areas**

Location - Surface parking shall not be located adjacent to nor be visible from the river corridor.

Design - Permanent surface parking areas greater than one acre in size shall be depressed below the level of the public street and/or fringed with earthen berms. Surface parking areas shall be broken into sections which contain a maximum of 100 cars. Each parking section is to be separated by landscaped buffers at least 10 feet wide and a minimum of 10 percent of the surface parking area (exclusive of setback) shall be landscaped. No parking stall shall be located more than 30 feet from a tree.

j) **Parking Structures**

Location - Parking structures shall not be located adjacent to the river corridor.

Design - Parking structures shall be provided as an integral part of each new development. Parking structures should be placed below grade and between or under buildings to reduce their visual prominence. Parking is not permitted

on roof surfaces. Tiered parking structures shall not be greater than two stories in height unless permitted by the Planning Director.

H. STREETScape AND SIGNAGE

A complete streetscape and signage program shall accompany the first planned development application. The Streetscape Design Program and the Street Signage and Graphics Program shall be based on the LCSP, Section 3.6.

The Streetscape Design program shall contain design criteria for the entire project area regarding:

- Spatial, visual and functional criteria for streetscape design;
- Architectural criteria governing scale, harmony and form;
- Transportation nodes and traffic relationships.
- Conceptual locations, limitations, and use of streetscape plant materials;
- Street furniture, structures, lighting, and traffic control elements;
- Security and safety elements, including handicap access;
- Acceptable materials and colors.

At the time applications are submitted for PCD/PRD processing for each DA, information regarding specific streetscape material at specific locations shall be provided for each parcel.

The Street Name Program program shall contain recommendations for naming all streets of four or more lanes throughout the entire project area. At the time applications are submitted for PCD/PRD processing for each DA, names of all remaining streets within that development area shall be submitted.

The Sign Program program shall contain sign design and location criteria for the entire project area including:

- Materials, scale, type, style, form and colors to be used in signs;
- Sign types and locations which are permitted and prohibited; and
- Theme entry monument design.

At the time applications are submitted for PCD/PRD processing for each DA, information regarding specific sign types, design, and location shall be provided for each parcel.

I. LANDSCAPE DESIGN

A Streetscape Planting Program shall accompany the first planned development application. That Program shall identify specific street trees to be used on all major north-south and

east-west roads within the project, in accordance with the Conceptual Landscape Plan, LCSP Figure 3.11.

1) General Requirements

a) Conformance - All landscape design shall meet or exceed the requirements of Chapter X, Article 1 of Division 7, of the San Diego Municipal Code, City-Wide Landscape Regulations, its technical supplement, and the landscape standards of the Mission Valley Community Plan.

b) Vegetation Permitted - Except for on-site trees present or relocated within the site, all trees used within the project must appear in either the On-site Plant Matrix, LCSP Table 3.2, or in the Streetscape Plant Matrix, LCSP Table 3.1, and shall be used in accordance with the Conceptual Landscape Plan, LCSP Figure 3.11.

c) Screening -

- Berms should be used to screen undesirable views. Berms shall have a 2:1 maximum side slope and a minimum height of 30 inches.
- To screen unsightly or undesirable views near a slope area, large dense shrubs shall be massed near the top rather than the toe of the slope.
- Large walls or fences shall be visually softened with large shrubs or small trees.

2) Streetscape Plantings

a) Characteristics - All street trees shall be long-lived (60 years or more), deep-rooted, low-maintenance, strong, insect and disease resistant, and tolerant of street environments.

b) Median and Rights-of-Way Tree Types -

- Medians and rights-of-way of all *east-west collector streets* shall be planted with trees of one type. At least 50 percent shall be a minimum 24-inch box size.
- Medians and rights-of-way of all *north-south collector streets* shall be planted with trees of one type different from that of the east-west streets. At least 50 percent shall be a minimum 24-inch box size.
- Rights-of-way on the circular *island road* (Parcel D, Street C) shall be planted with trees of one type.
- Rights-of-way on all *residential access roads* shall be planted with trees of one type different from that of east-west or north-south collector streets.

c) Sight Distances - Trees must not be planted within 25 feet of any intersection nor within 10 feet of street lights, fire hydrants and driveways. Determination of adequacy of sight distances shall be made by the City Engineer.

d) **Streetscape Plant Hierarchy** - At the intersection of various plantings, the following hierarchy shall apply: Buffer planting always takes precedence; theme entry planting takes precedence over other types of vegetation; east-west street plantings takes precedence over north-south street planting.

3) **Surface Parking Planting** -

a) **Coverage** - In addition to required setbacks from public streets, a minimum 10 percent of any surface parking area shall be landscaped. See Circulation, IG Section II/G6i.

b) **Tree Type, Height, and Spread** - Round-headed, shade-producing non-deciduous trees must be used on surface parking areas. At maturity, trees must have height and spread of at least 30 feet.

c) **Characteristics** - Trees must be long-lived (60 years or more), deep-rooted, clean, low-maintenance, strong, insect and disease resistant, and tolerant of street environments.

d) **Screening** - Trees and shrubs should be combined with berms to screen surface parking areas from adjacent view corridors, development, streets, and river views. Screening shall be a minimum of 30 inches in height.

4) **On-Site Planting**

a) **Graded Areas** -

- Areas that are graded but not paved or built upon must be landscaped within 90 days of completion of grading with low- water-use groundcover mix.
- Graded slopes must be revegetated with groundcover, shrubs, and trees within 90 days of completion of construction.

b) **View Corridors** - Landscaping should frame view corridors, especially to the San Diego River. Trees within identified view corridors shall include only tall canopy trees rather than short, dense trees.

c) **Turf Areas** - Use of turf is to be minimized except for recreational areas or theme entries. At theme entries, use of turf is limited to 50 percent of the total area. Cool season grasses shall be limited to highly visible project entrances and areas designed for active recreation.

5) **Landscaped Area Within Street Rights-of-Way** -

When pedestrian paths are located within public street rights-of-way, a landscaped area shall separate the pedestrian path from the street.

a) **Adjacent to Major Streets**, the ten foot pedestrian path shall be separated from the curb by an eight foot landscaped strip;

b) Adjacent to Four-Lane Collector Streets, the eight foot pedestrian path shall be separated from the curb by a six foot landscaped strip; and

c) Adjacent to Two-Lane Streets, the six foot pedestrian path shall be separated from the curb by a five foot landscaped strip.

6) Irrigation

a) Subsurface System - All irrigation systems must be automatic, below ground, and fully in compliance with building code regulations.

b) Conservation - Water-conserving irrigation systems shall be used, including drip systems, moisture sensors, and/or low gallonage heads.

c) Metering - Separate water meters must be provided on all irrigation systems.

d) Screening - Backflow control devices must be screened from public view.

e) Overspray - Irrigation overspray into paved areas shall be minimized.

f) Vegetative Barrier/Wetland Habitat - Habitat areas in the riparian zone shall be watered with a combination of overhead spray irrigation for hydroseeding and individual drip emitters for each shrub and tree. The system will be

permanently installed although operated only for the time necessary for the vegetation to establish, as determined by EQD.

J. ENERGY CONSERVATION

1) Compliance Requirements - All new construction shall comply with building energy efficiency standards set forth in Title 24 of the California Administrative Code, Sections 1401 through 1410.

2) Architectural Methods

a) Daylight Emphasis - Windows, skylights, light wells, and similar features shall be used to maximize natural lighting in work areas during daylight hours.

b) Light Fixtures - Low-wattage light fixtures, dimmer switches, zoned lighting banks, and time controlled lighting in public areas shall be used throughout the LCSP project.

c) Shade - Overhangs or canopies shall be used to shade direct sun and reduce heat gain.

d) Vegetation - Deciduous trees shall be used in south-facing and west-facing outdoor areas around buildings to provide solar access during winter months and shade in summer months

K. WATER CONSERVATION

1) **Mechanisms and Fixtures** - Low-flow shower heads and faucets, low-flow toilets, pressure regulators, sprinkler system timers, etc. should be utilized.

2) **Landscaping** - Low-water-use plant material and drip irrigation systems shall be used.

L. NOISE ATTENUATION

1) Acoustical Analysis

a) **Noise Readings** - Noise level readings shall be taken for all development along Friars Road prior to site design.

b) **Acoustical Analysis** - An acoustical analysis shall be prepared for all areas proposed for residential development at the time Planned Development permits are processed.

2) Mitigation

Noise mitigation measures including but not limited to walls, berms, and setbacks shall assure that noise levels to which residents are exposed will not exceed standards set by the General Plan of the City of San Diego.

In all areas adjacent to Friars Road, either setbacks or elevation differences sufficient for noise buffering will be maintained. Accurate readings for noise levels shall be determined for all proposed development along Friars Road prior to site

design to determine if increased setbacks and/or offsets are necessary for noise mitigation.

Berms are the preferred noise attenuation method along Friars Road. In areas where berms are not feasible for noise attenuation, walls may be used for the same purpose. The character of these walls should create visual interest by offsets in facade to avoid strictly linear walls and therefore relieve monotony and allow incorporation of landscaped recesses.

When perimeter walls are used in the project, these walls will be of a strong, simple, unadorned character with a minimum 8" thickness and maximum 6'0" height.

Tops of all perimeter walls should be kept horizontal. Where grade changes occur, the walls should stop and incorporate a short return. Spaces between walls should be heavily planted.

3) **Code Conformance** - Conformance with Section 24-2501 of the State Building Code, which applies to dwellings other than detached single-family homes, shall be maintained.

M. GRADING METHODS

An Earth Moving and Grading Program for each Development Area shall accompany the first planned development application for that Development Area. The Program shall detail a grading and erosion control program in accordance with Earth Moving/Grading, LCSP Section 3.10, including rough grading program for the entire project; phasing of grading for flood

channel, streets, and parking lots; and erosion control techniques.

At the time applications are submitted for PCD/PRD processing for each DA, grading plans shall be provided for each parcel.

N. PUBLIC FACILITIES AND IMPROVEMENTS

The following Schedule of Public Facilities and Improvements identifies on- and off-site improvements, methods of financing, and anticipated phasing for facilities associated with the Levi-Cushman Specific Plan. Actual share of costs is identified in Exhibit F of the Development Agreement.

The Schedule of Public Facilities and Improvements lists specific public transit and open space network facilities which must be provided with each phase and general public (non-road) improvements which must be completed with all phases. Road improvements are reproduced directly from the LCSP EIR Table 6, "Chevron Transportation Improvements." The landowner and/or project tenants shall bear the responsibility for constructing and maintaining all public facilities listed herein to the degree determined under the provisions of the Development Agreement. When "Subdivision Improvement" is indicated as the method of implementation in the Schedule of Public Facilities and Improvements, then funds for the maintenance of these improvements shall be guaranteed through creation of one or more maintenance districts within the LCSP project area.

Typically, the requirement for all on-site project-related facilities within a Development Area is triggered by the submission of a planned development application for that DA. Major exceptions are:

1) River Channel

The detailed design for complete channelization of the San Diego River between Fashion Valley Road and Street A shall accompany the first planned development application. The design shall describe the entire two-phase construction program even though the second phase is not expected to commence until DA3.

Funding for construction of the entire channel must be assured prior to approval of final maps for the initial development within the LCSP project area.

Building permits shall not be issued until completion of the flood control channel and revegetation plan adjacent to the building site.

2.) Pedestrian Bridge

Design and construction of the pedestrian bridge which lies within DA 1 and spans the San Diego River shall not be required as a condition of development for DA 1. Design and construction of the bridge shall be required as a condition of development of DA 2, or it may be required prior to the issuance of a building permit for DA 2 if requested by the City (a) following approval of planned developments within DA 1

and (b) if construction of the LRT has begun into Mission Valley.

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS

DEVELOPMENT AREA 1 - ON-SITE IMPROVEMENTS

<u>Project Name</u>	<u>Description</u>	<u>Financing/Implementing Method</u>
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PUBLIC TRANSIT

Bus turnouts and bus stops	Street improvements to accommodate busses as required by the San Diego Transit Corporation.	Subdivision Improvement
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OPEN SPACE NETWORK

San Diego River	Phase I channel improvements to 100-year flood level per LCSP	Subdivision Improvement
River Buffer	Minimum 25'-wide buffer with vegetative barrier and associated uses.	Subdivision Improvement

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

DEVELOPMENT AREA 2 - ON-SITE IMPROVEMENTS

<u>Project Name</u>	<u>Description</u>	<u>Financing/Implementing Method</u>
PUBLIC TRANSIT		
Bus turnouts and bus stops	Street improvements to accommodate busses as required by the San Diego Transit Corporation.	Subdivision Improvement
LRT right-of-way for trackage	Provide a maximum 35' rightof-way to accommodate the LRT trackage throughout project area.	Final Map Condition
LRT right-of-way for station	Provide a maximum 60' x 360' right-of-way to accommodate LRT station.	Final Map Condition
OPEN SPACE NETWORK		
River Buffer	Minimum 25'-wide buffer with vegetative barrier and associated uses.	Subdivision Improvement
Open Use Areas	Parcel H	Subdivision Improvement
Pedestrian Bridge (Across San Diego River)	Construct as per LCSP/IG	Subdivision Improvement

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

DEVELOPMENT AREA 3 - ON-SITE

Project Name	Description	Financing/Implementing Method
PUBLIC TRANSIT		
Bus turnouts and bus stops	Street improvements to accommodate busses as required by the San Diego Transit Corporation.	Subdivision improvements
OPEN SPACE NETWORK		
San Diego River	Phase II channel improvements to 100-year flood level per LCSP	Subdivision Improvement
	Drainage swale west of Street A to connect to existing low-flow channel if no downstream improvements	Subdivision Improvement
	Pilot channel constructed west of Street A if down stream development has not already improved river and if Camino De La Reina is constructed from west project boundary to Napa St.	Subdivision Improvement
River Buffer	Minimum 25'-wide buffer with vegetative barrier and associated uses.	Subdivision Improvement
Open Use Area	Parcels N, R, T	Subdivision Improvement

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

GENERAL PUBLIC IMPROVEMENTS WHICH MUST BE COMPLETED WITH EACH PHASE

<u>Project</u>	<u>Description</u>	<u>Financing Method</u>
Pedestrian Paths within or adjacent to buffer and ROW	Construct/maintain on-site pedestrian paths	Subdivision Improvement
Bikeways within or adjacent to buffer and ROW	Construct/maintain on-site bikeways.	Subdivision Improvement
Landscaping within ROW	Construct/maintain on-site landscape strip between curb and pedestrian path.	Subdivision Improvement
	Construct/maintain on-site landscaped medians.	Subdivision Improvement
Water	Provide interior water system.	Subdivision Improvement
	Trunk water.	Water Fees/City
Sewer	Provide interior sewer system.	Subdivision Improvement
	Trunk sewer.	Sewer Fees/City
Storm Drainage	Provide a storm drainage	Subdivision Improvement

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

GENERAL PUBLIC IMPROVEMENTS WHICH MUST BE COMPLETED WITH EACH PHASE

<u>Project</u>	<u>Description</u>	<u>Financing Method</u>
Gas & Electric	Install Facilities	Subdivision Improvement/SDG&E
Telephone Service	Install Facilities	Subdivision Improvement/Telephone Company
Cable television	Install Facilities	Subdivision Improvement/CATV

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

GENERAL PUBLIC IMPROVEMENTS WHICH MUST BE COMPLETED WITH EACH PHASE

<u>Project</u>	<u>Description</u>	<u>Financing Method</u>
Parks		Park Fee/City
Schools	Schools provided by the San Diego Unified School District	School Fees/SDUSD
Fire Station	Provide fire station on west side of Rt163, near interchange.	Development Agreement/City
Miscellaneous Road Improvements	Provide intersection improvements, signing and signal modifications.	Subdivision Improvement/ Development Agreement
MVCP Transportation Improvements	Provide various road improvements listed in the MVCP.	All Phases with thresholds as listed in Table 6/LCSP EIR. Costsharing basis as determined by the City Engineer and PFFP or Development Agreement.

NOTES AND DEFINITIONS

1. A subdivision improvement is required by the city to be complete or bonded prior to recording of a final map.
2. A map condition is required to be accomplished to the satisfaction of the City Engineer prior to recording a final map.
3. A final map requirement refers to a component of a final map, for instance a dedication of easement would appear on the final map document.
4. A development agreement identifies the terms of participation in specified improvement projects.

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

TABLE 6

CHEVRON TRANSPORTATION IMPROVEMENTS

(PROJECTS TO BE ASSURED TO THE SATISFACTION OF THE CITY ENGINEER BEFORE THRESHOLD CAN BE EXCEEDED)

DEVEL. AREA	ON/OFFSITE	IMPROVEMENT***	OTHER PROJECTS	LEVI CUSHMAN SPECIFIC PLAN ONLY	COMMENTS
1 A&B	Onsite	Construct new North/South street (4 lane collector) between Hotel Circle North and "B" Street fronting Dev. Area 1.	0	N.A. With first final map of Dev. Area 1	Project Access
1 A&B	Onsite	Construct Street B as a 4-lane major from Street C to Fashion Valley Road, with adjacent tentative map.	0	N.A. With first final map of Dev. Area 1	Project Access
1 A&B	Onsite	Construct Street C as a 4-lane major from the river to Street B, with adjacent tentative map.	0	N.A. With first final map of Dev. Area 1	Project Access
1 A&B	Onsite*	Realign and widen Fashion Valley Road as a 4-lane major street with all abutting improvements south of Friars Road (78/98 cross-section) to align with reconstructed westbound I-8 off and on ramps. Access to Fashion Valley Road shall be via a new signalized intersection about one half way between New Casino de la Reina and relocated Hotel Circle North. This improvement shall be assured prior to approval of the first final map for development area 1.	0	1-4 With first final map of Dev. Area 1	Any development in sectors 1-4 to be conditioned with participation in this improvement, the extent of participation to be determined by the City Engineer.
1 A&B	Offsite*	Modify & signalize the westbound on and off ramps to I-8 at Hotel Circle North and the eastbound on and off ramps at Hotel Circle South, concurrent with Community Plan projects 10-A and 8-B. Realign Hotel Circle North between Camino de la Reina and Fashion Valley Road and improve the intersection of Hotel Circle South and Camino de la Reina to a "T" configuration as shown in concept in Appendix F-2, and as described in Community Plan Project 10-A. Additional right-of-way dedication necessary for the reconstruction of Hotel Circle North between Fashion Valley Road and Camino de la Reina to the satisfaction of the City Engineer or as shown in concept in Appendix F-2 shall be agreed to by the adjacent property owner.	0	1-4 With first final map of Dev. Area 1	Any development in sectors 1-4 to be conditioned with participation in these improvements.
1 A&B	Offsite*	Improve the Fashion Valley Road river crossing to accommodate a 10 year design, in connection with Community Plan project 10-A.	0	1-4 With first final map of Dev. Area 1	Any development in sectors 1-4 to be conditioned with participation in this improvement.
1 A&B	Offsite*	Widen and signalize the "River Valley" project access at the Hotel Circle North/most westerly I-8 ramps to provide necessary through and turn lanes as required by the City Engineer. These improvements are to be provided by "River Valley" or before council approval of the first final map for Development Area 1.	0	3,4 First final map of Dev. Area 1	Any development in sectors 3, 4 to be conditioned with participation in this improvement.

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

** DEVEL. ON/OFFSITE AREA		IMPROVEMENT***	(PROJECTS TO BE ASSURED TO THE SATISFACTION OF THE CITY ENGINEER BEFORE THRESHOLD CAN BE EXCEEDED) OTHER PROJECTS LEVI CUSHMAN SPECIFIC PLAN ONLY E.D.U. SECTOR			COMMENTS
1 ASB Offsite* Various Lcns.	Participate in Community Plan Transportation Improvement Projects Numbers 6, 8B, 10A, 10B, 11, 14 and 19A (see Table 2) as determined by the city engineer.					
	6	Friars Road - Restripe for six lanes, Colusa Street to Ulric Street (Fashion Valley Road to Ulric Street assured prior to the first final map for Development Area 1) plus appropriate abutting improvements (102/122 Cross-Section).	400	1	First final map of Dev. Area 1	Levi-Cushman Specific Plan Development Area 1 to assure striping for 6 lanes between Fashion Valley Rd. and Ulric Street only.
	8b	Hotel Circle South - Widen to four lanes between the eastbound Hotel Circle ramps and Camino de la Reina.	200	3	First final map of Dev. Area 1	_____
	10a	Hotel Circle North - Widen to four lanes between westbound I-8 ramps and Camino de la Reina.	200	4	First final map of Dev. Area 1	_____
	10b	Camino de la Reina - Construct and widen to a four lane major between Fashion Valley Road and SR-163.	2,900	4	2,900 E.D.U. in sectors 1,3,4	_____
	11	Camino de la Reina (existing) - Widen to four lanes between Hotel Circle North and Avenida del Rio. To be assured at the 400 equivalent dwelling unit (E.D.U.) threshold for sector 4, shown in Table 2.	400	4	400 E.D.U. in sector 4	_____
	14	SR-163 and Friars Road - Add dual lefts for eastbound-northbound on-ramps; widen north leg of interseccion to accept two turning lanes. To be assured at the 500 E.D.U. threshold shown in Table 2 for sectors 1, 2, 4 - 7.	500	1,2,4-7	500 E.D.U. in sectors 1, 2, 4-7	_____
	19A	Camino de la Reina - Widen to four lane major, SR-163 to Mission Center Road. To be assured at the 400 E.D.U. threshold for sectors 5 and 7, shown in Table 2.	400	5,7	400 E.D.U. in sectors 5, 7	Levi-Cushman level of participation in improvements to be included in the development agreement.
NOTE: Mission Valley Transportation Improvement Project Numbers 8B, 10A, and 10B to be assured prior to approval of the first final map for development area 1.						
2 ASB Onsite		Construct Street C as a 4 lane major between Friars Road and Camino De La Reina and as a 4-lane collector from the river to Camino De la Reina, with adjacent tentative maps.	0	N.A.	First final map of adjacent tentative maps in Dev. Area 2	On-site street not needed for community-wide circulation in this phase.

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

(PROJECTS TO BE ASSURED TO THE SATISFACTION OF THE CITY ENGINEER
BEFORE THRESHOLD CAN BE EXCEEDED)

** DEVEL. AREA	ON/OFFSITE	IMPROVEMENT***	OTHER PROJECTS EDU. SECTOR	LEVI CUSHMAN SPECIFIC PLAN ONLY	COMMENTS
2 A&B Onsite		Construct Street D as a 4-lane major from Friars Road to Camino De La Reina, with adjacent tentative maps.	0	N.A. First final map of adjacent tentative maps in Dev. Area 2	These are on-site streets not needed for community-wide circulation in this phase.
2 A&B Onsite		Construct Camino De La Reina as a 4-lane major from Street D to Fashion Valley Road, with adjacent tentative maps.	0	N.A. First final map of adjacent tentative maps in Dev. Area 2	
2 A&B Offsite*		Improve the Route 163/Friars-Ulric southbound off ramp to increase capacity. (Community Plan Project #16 to be assured at the 7,500 E.D.U. threshold shown in Table 2).	7,500	1-4 7,500 E.D.U. in sectors 1-4	_____
2 A&B Offsite*		Construct a westbound Friars to southbound Morena - I-5 connection (optional at the discretion of the City Engineer).	6,000	1-4,5,7 6,000 E.D.U. in sectors 1-4, 5, 7	This is an optional improvement Not in the Community Plan
2 A&B Offsite* Various Locna.		Participation in Community Plan Transportation Improvement Project Numbers 6 and 17 (see Table 2) as determined by the city engineer.			
		6 Friars Road - Restripe for six lanes, Colusa Street to Ulric Street. (Colusa Street to Fashion Valley Road assured prior to first final map of Development Area 2).	400	1 First final map of Dev. Area 2	Levi-Cushman Specific Plan Development Area 2 to assure striping for 6 lanes between Fashion Valley Road and Colusa Street only.
		17 SR-163 and Friars Road - Cut back median on bridge to allow three westbound lanes through signal for northbound on-ramps; approximately 85% of build-out in these sectors. To be assured at the 4,700 E.D.U. threshold shown in Table 2.	4,700	1,2,4-7 4,700 E.D.U. in sectors 1, 2, 4-7	_____
3 A&B Onsite		Construct Camino De La Reina as a 4-lane major street from the west project boundary to Street D, to be constructed concurrently with the new Via Las Cumbres interchange.	0	N.A. First final map of Dev. Area 3	To be constructed concurrently with the new interchange.
3 A&B Onsite		Construct Street B as a 4-lane major street from Street C to Street A, to be constructed concurrently with the new Via Las Cumbres interchange.	1,500	1-4 First final map of Dev. Area 3	To be constructed concurrently with the new interchange.
3 A&B Onsite		Construct Street A as a 4-lane major street (including a river bridge) from Friars Road to Street B, to be constructed concurrently with the new Via Las Cumbres interchange.	1,500	1-4 First final map of Dev. Area 3	To be constructed concurrently with new interchange (this is the extension of Via Las Cumbres from Friars Road to the new interchange.)

SCHEDULE OF PUBLIC FACILITIES AND IMPROVEMENTS - Cont'd

(PROJECTS TO BE ASSURED TO THE SATISFACTION OF THE CITY ENGINEER BEFORE THRESHOLD CAN BE EXCEEDED)

<u>DEVEL. AREA</u>	<u>ON/OFFSITE</u>	<u>IMPROVEMENT***</u>	<u>OTHER PROJECTS EBL SECTOR</u>	<u>LEVI CUSHMAN SPECIFIC PLAN ONLY</u>	<u>COMMENTS</u>	
3	A&B Offsite*	Construct Camino De La Reina as a 4-lane major street from the west project boundary to Napa Street. (Community Plan Project #7). To be constructed concurrently with the new Via Las Cumbres interchange.	1,500	1	First final map of Dev. Area 3	_____
3	A&B Offsite*	Widen Hotel Circle North to four lanes between the Hotel Circle North overcrossing of I-8 and Via Las Cumbres. To be constructed concurrently with the new Via Las Cumbres interchange.	3,000	1,3	First final map of Dev. Area 3	To be constructed in connection with the new interchange.
3	A&B Offsite*	Construct a new interchange at Street A and I-8. (Community Plan Project #12 to be assured prior to approval of the first final map for Development Area 3).	3,000	1,3	First final map of Dev. Area 3 (3530 E.D.U. in Dev. Areas 1 & 2)	_____
3	A&B Offsite*	Provide Right of Way for San Diego Trolley, as determined in the development agreement, or as determined by the City Engineer. ¹¹	N.A.	N.A.	N.A.	_____
3	A&B Offsite*	Participate in Community Plan Transportation Improvement Project numbers 8A, 15 and 18 (see table 2) as determined by the city engineer.	_____	_____	_____	_____
		8a Hotel Circle South - Remove parking and restripe for three lanes between the I-8/Presidio overcrossing and the eastbound Hotel Circle Ramps prior to approval of the first final map for Development Area 3.	200	3	First final map of Dev. Area 3	_____
	15-33	Hazard Center Drive - Improve to a four-lane street along north side of river between Camino de la Reina and Mission Center Road, at the 12,000 E.D.U. threshold shown in Table 2, for sectors 1, 2, 4-7.	12,000	1,2,4-7	12,000 E.D.U. in sectors 1, 2, 4-7	_____
	18	SR-163 and Friars Road - Move northbound on-ramps eastward or replace with a loop or flyover; approximately 95% build-out in these sectors, at the 18,000 E.D.U. threshold shown in Table 2, for sectors 1, 2, 4-7.	18,000	1,2,4-7	18,000 E.D.U. in sectors 1, 2, 4-7	_____

* The extent of Chevron responsibility for these improvements to be included in the development agreement.

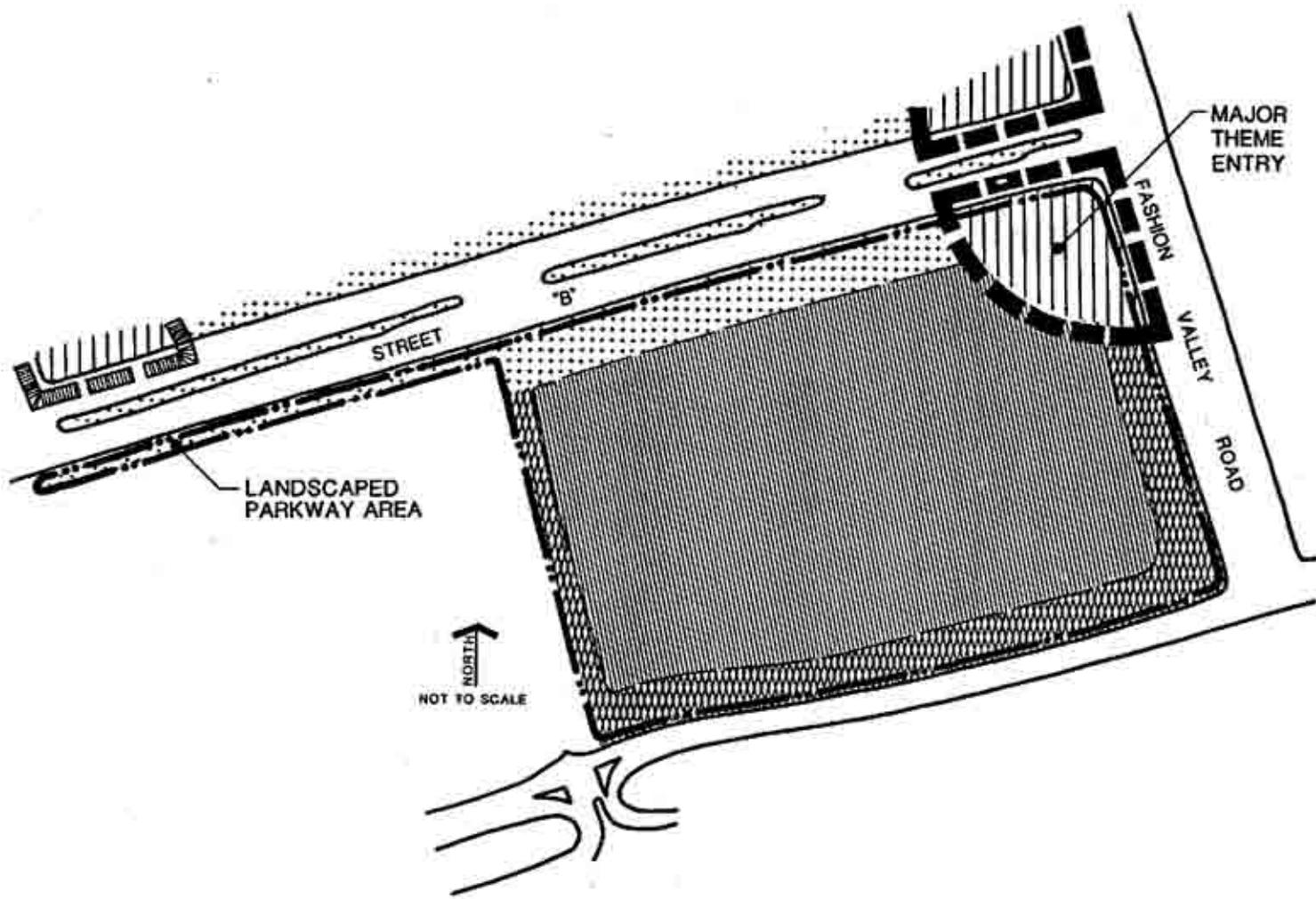
** Development to proceed in listed sequence unless revisions to the traffic analysis revise this phasing of improvements.

*** Assured improvements to be completed, under contract, bonded, scheduled in the City Capital Improvements Program, or programmed in the State Transportation Improvements Program, to the satisfaction of the City Engineer.

¹¹NOTE: The 4% LRT bonus (1,652 ADT) applies only after construction of the LRT is assured to the satisfaction of the City Engineer.

III. PARCEL MAPS

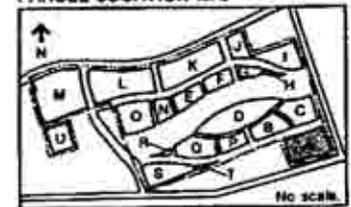
The parcel maps which follow provide schematic illustrations of the land-based criteria imposed by the LCSP and the IG. Maps are provided for all parcels.



LEGEND

- PARCEL BOUNDARY
- [Vertical lines] DEVELOPMENT AREA
- [Horizontal lines] NOISE BUFFER
- [Cross-hatch] FRIARS ROAD THEME TREE
- [Dotted] EVERGREEN
- [Small dots] FLOWERING TREE
- [Vertical lines in boxes] ORNAMENTAL ENTRANCE PLANTING
- [Grid] TALL PALM TREE
- [Wavy lines] RIPARIAN VEGETATION
- [Diagonal lines] SCREEN/SETBACK PLANTING
- [Diagonal lines] BUFFER AREA PLANTING
- ▲ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

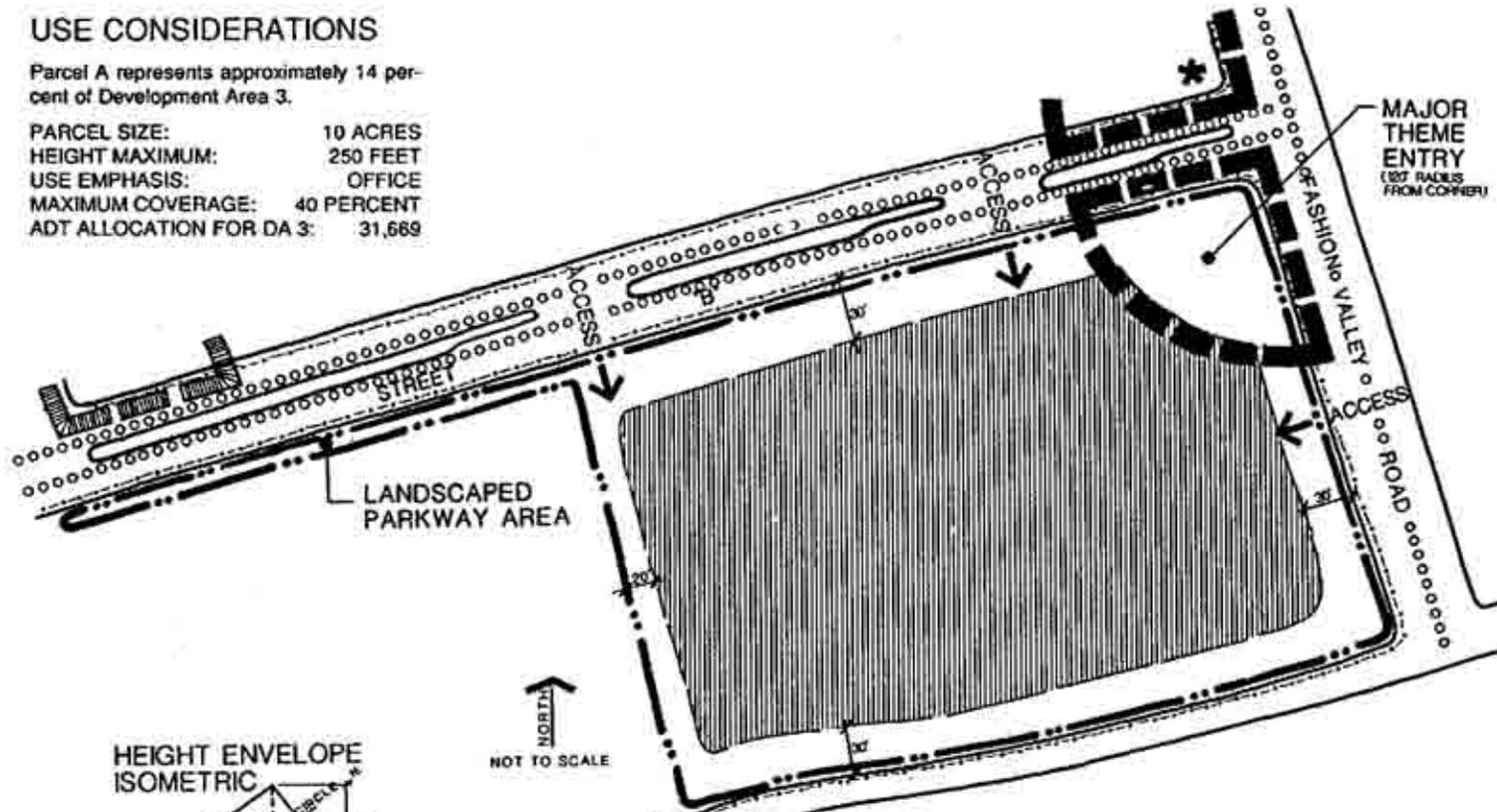
**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL A
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel A represents approximately 14 percent of Development Area 3.

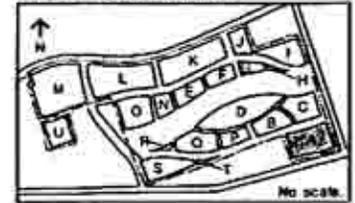
PARCEL SIZE: 10 ACRES
 HEIGHT MAXIMUM: 250 FEET
 USE EMPHASIS: OFFICE
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669



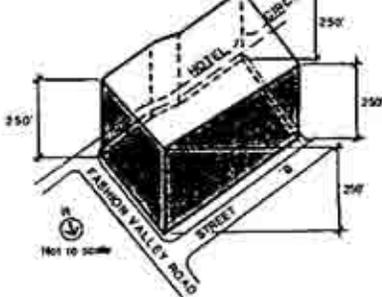
LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- BUS ROUTES
- ++ LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



HEIGHT ENVELOPE ISOMETRIC



↑ NORTH
 NOT TO SCALE

SPECIAL ELEMENTS

Development pattern of Parcel A will be contingent on adoption of a final design for the I-8/Fashion Valley Road interchange. Parcel A will not develop until that design is adopted.

A location adjacent to the freeway interchange and a 250' height maximum give development on Parcel A high visibility and special prominence. Development on this site influences the perception of the entire project and must therefore clearly express LCSP themes.

Since Parcel A is located outside the central LCSP area, connections with the rest of the project must be emphasized, especially via pedestrian, bikeway, streetscape, and open space linkages and architectural continuity.

Sloping height requirements do not apply to Parcel A since the area required by the I-8 interchange has not been determined and a reasonable development envelope must be preserved.

Attention must be given to the project "edges," especially to assure that a suitable transition is made to adjacent off-site areas.

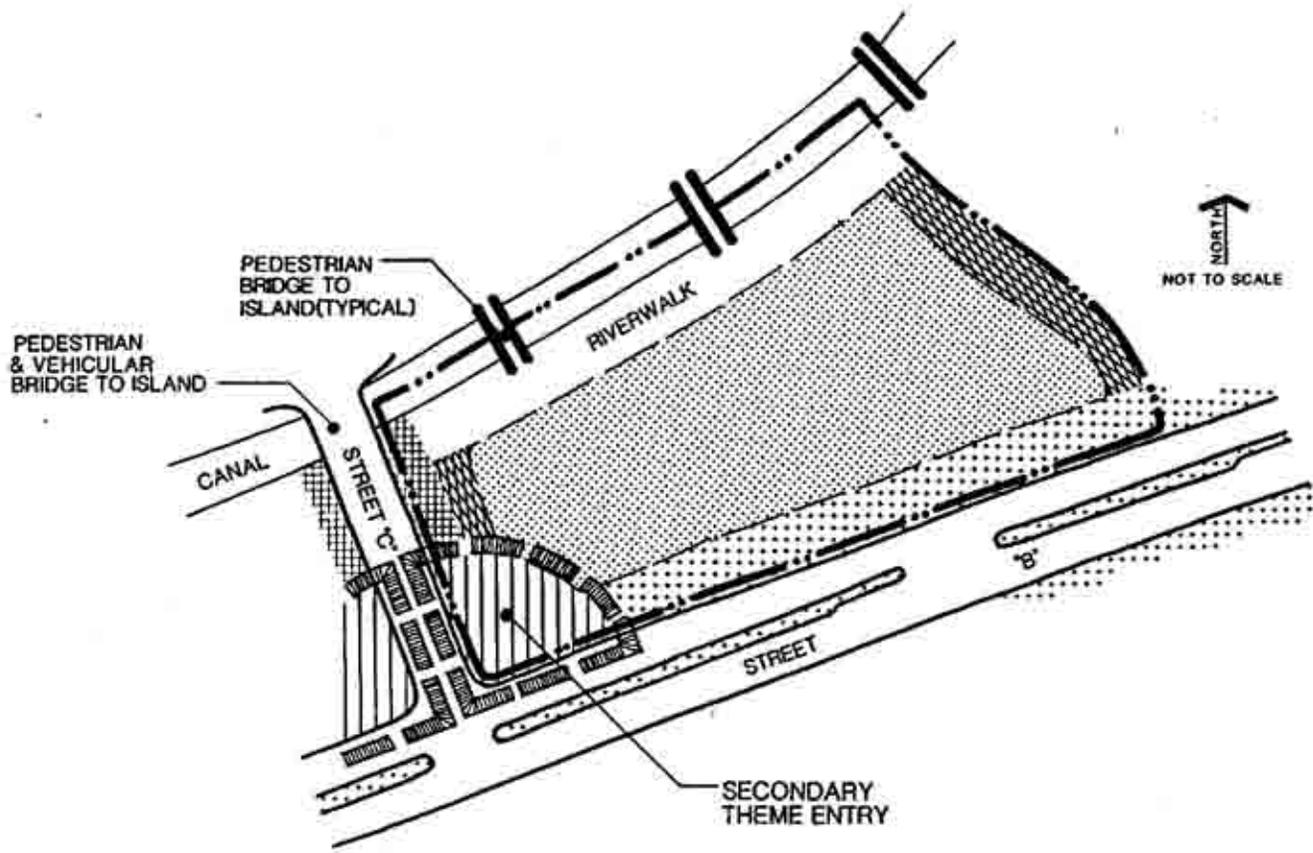
Design of the theme entry must be coordinated with the theme entry design on Parcel C.

Massing of development must permit a through-view from I-8 to the river.

Accommodation must be made for the eastern end of Hotel Circle North to cul-de-sac into Parcel A.

LEVI - CUSHMAN
 SPECIFIC PLAN

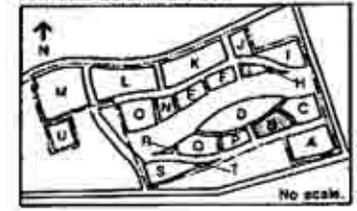
PARCEL A
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Stippled Box] DEVELOPMENT AREA
- [Horizontal Lines Box] NOISE BUFFER
- [Cross-hatch Box] FRIARS ROAD THEME TREE
- [Dotted Box] EVERGREEN
- [Large Dotted Box] FLOWERING TREE
- [Vertical Lines Box] ORNAMENTAL ENTRANCE PLANTING
- [Grid Box] TALL PALM TREE
- [Wavy Lines Box] RIPARIAN VEGETATION
- [Diagonal Lines Box] SCREEN/SETBACK PLANTING
- [Diagonal Lines Box] BUFFER AREA PLANTING
- ▲ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL B
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel C represents approximately 27 percent of Development Area 1.

PARCEL SIZE: 7 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: RETAIL/HOTEL
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 3: 17,3800

SPECIAL ELEMENTS

Development on Parcel C must include a riverwalk along the canal, pedestrian bridge(s) to the island, a buffer along the river channel, and bikeways and pedestrian paths. A bus stop is proposed near the Fashion Valley Road/Street B intersection.

Coordination with Parcels B and D is necessary to assure bridge, riverwalk, buffer, pedestrian, and bike system design continuity.

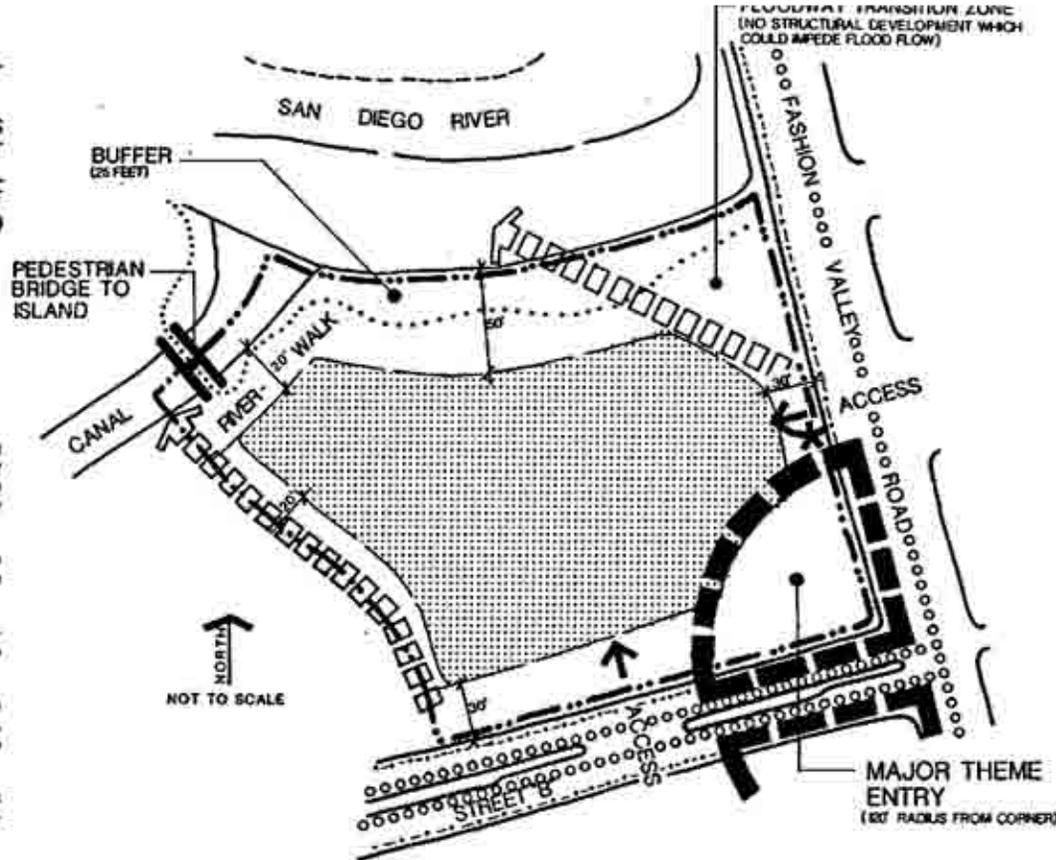
Since Parcel C will develop prior to Parcel A, it will establish the entry theme design that will subsequently be adopted for Parcel A.

The transition zone in northeast corner of parcel provides an opportunity for meandering pedestrian and bike paths, native and ornamental vegetation, and passive recreation areas.

Special design attention is necessary as the riverwalk merges with the buffer on the north western portion of parcel.

A view corridor must be established along the western border of the parcel and visually terminate at a park, sculpture, etc. on the island. Views must be provided through the transition zone into the river channel.

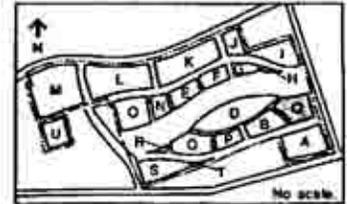
Massing of development on Parcel C must permit a through-view from Interstate 8 to the river unless that view corridor is provided through Parcel B.



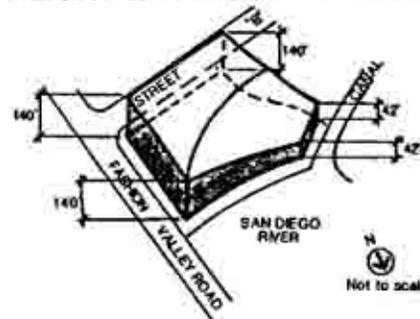
LEGEND

- PARCEL BOUNDARY
- [Stippled Box] DEVELOPMENT AREA
- [House Icon] VIEW CORRIDOR
- [Up Arrow] ACCESS POINTS
- [Star Icon] RECOMMENDED BUS STOP
- [Circle Dots] BUS ROUTES
- [Crossed Lines] LRT ROUTE
- [Dotted Line] BICYCLE PATH
- [Dashed Line] BICYCLE LANE
- [Solid Line] BICYCLE ROUTE

PARCEL LOCATION MAP

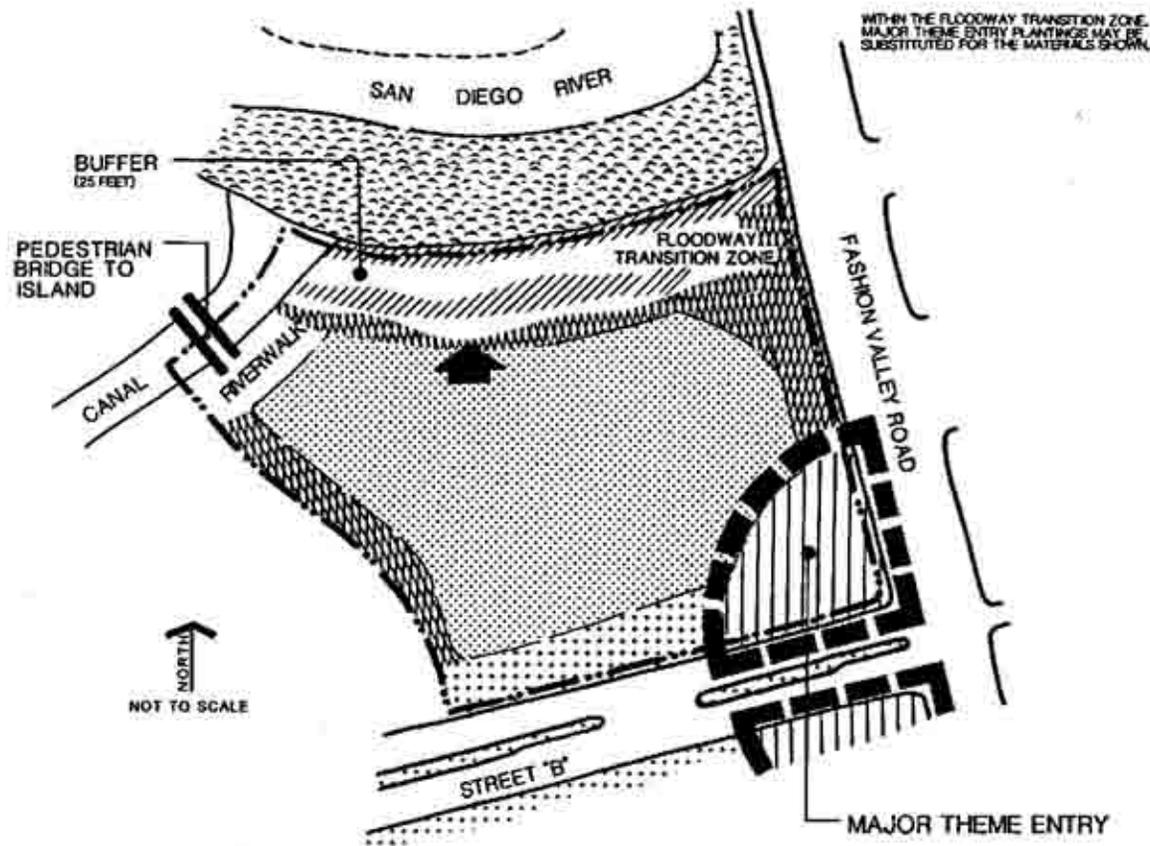


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
SPECIFIC PLAN

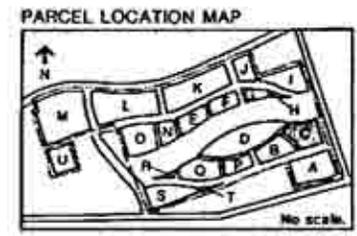
PARCEL C
SUMMARY MAP



WITHIN THE FLOODWAY TRANSITION ZONE, MAJOR THEME ENTRY PLANTINGS MAY BE SUBSTITUTED FOR THE MATERIALS SHOWN.

LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS



MINIMUM LANDSCAPING: 60 PERCENT

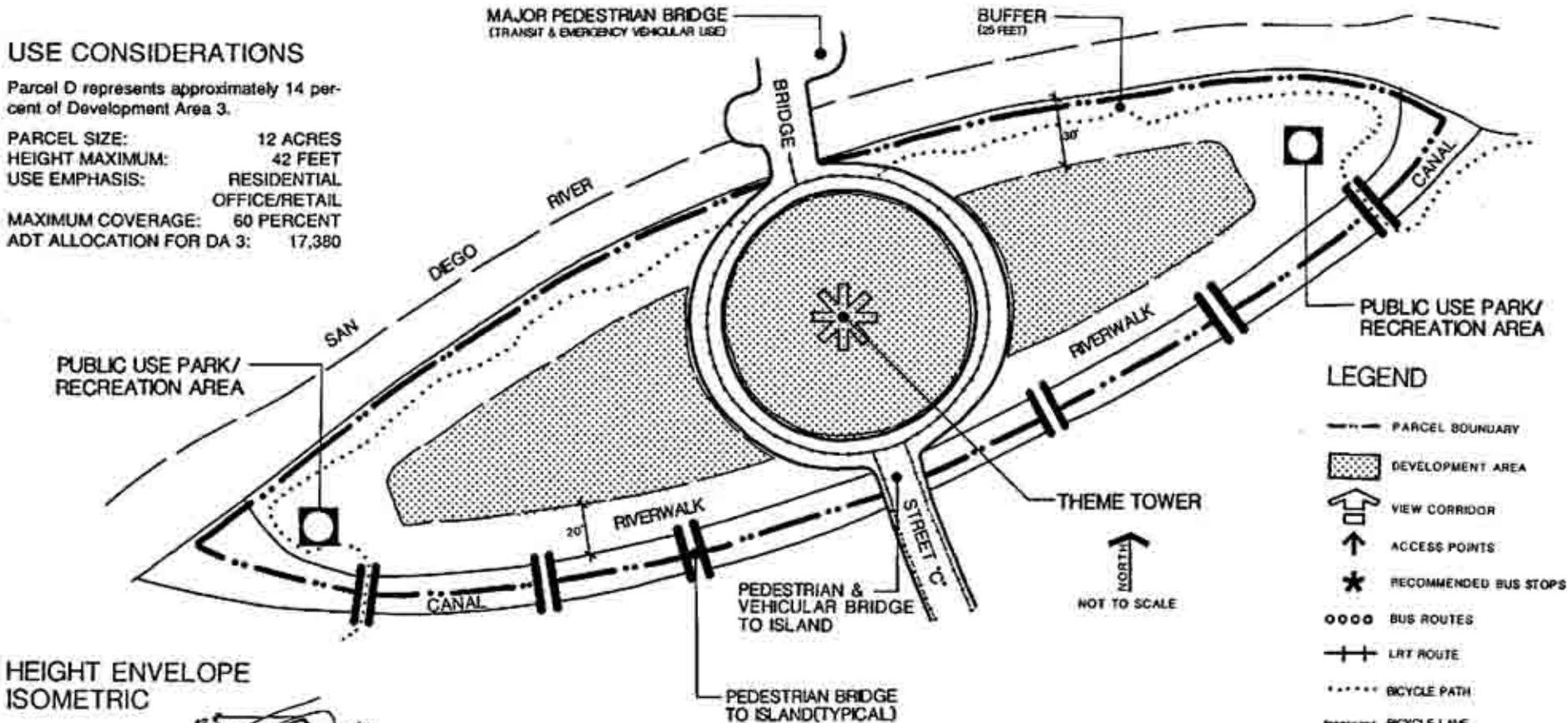
**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL C
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel D represents approximately 14 percent of Development Area 3.

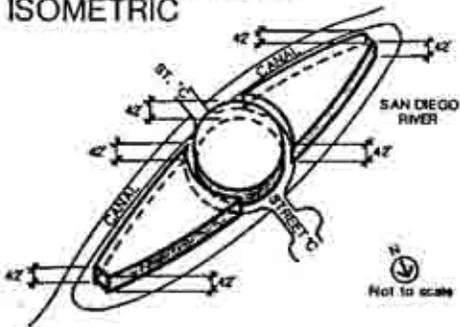
PARCEL SIZE: 12 ACRES
 HEIGHT MAXIMUM: 42 FEET
 USE EMPHASIS: RESIDENTIAL OFFICE/RETAIL
 MAXIMUM COVERAGE: 60 PERCENT
 ADT ALLOCATION FOR DA 3: 17,380



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- +— LRT ROUTE
- ⋯ BICYCLE PATH
- ⋯ BICYCLE LANE
- BICYCLE ROUTE

HEIGHT ENVELOPE ISOMETRIC



SPECIAL ELEMENTS

Development on Parcel D must include a river buffer, a riverwalk along the canal, pedestrian bridge(s) across the canal, a central pedestrian and vehicular bridge south via Street C, and bikeways and pedestrian paths.

Coordination with Parcels P, B, C, and Q is necessary to assure bridge, riverwalk, buffer, and pedestrian and bike system design continuity.

To emphasize the pedestrian nature of the island, at least 50 percent of the parking needs of the island are to be met by parking facilities off the island.

Public use areas are to be provided at both ends of the island and may include amphitheater, parks, recreation areas, picnic or viewing areas, sculpture gardens, etc.

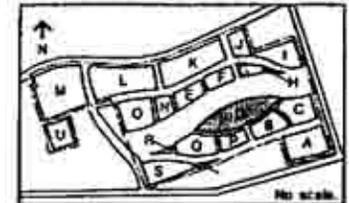
Special design attention is necessary as riverwalk merges with buffer at both ends of the island.

Theme tower height to be determined at PCO stage.

Program to be provided for water quality management and monitoring for the closed circuit canal system.

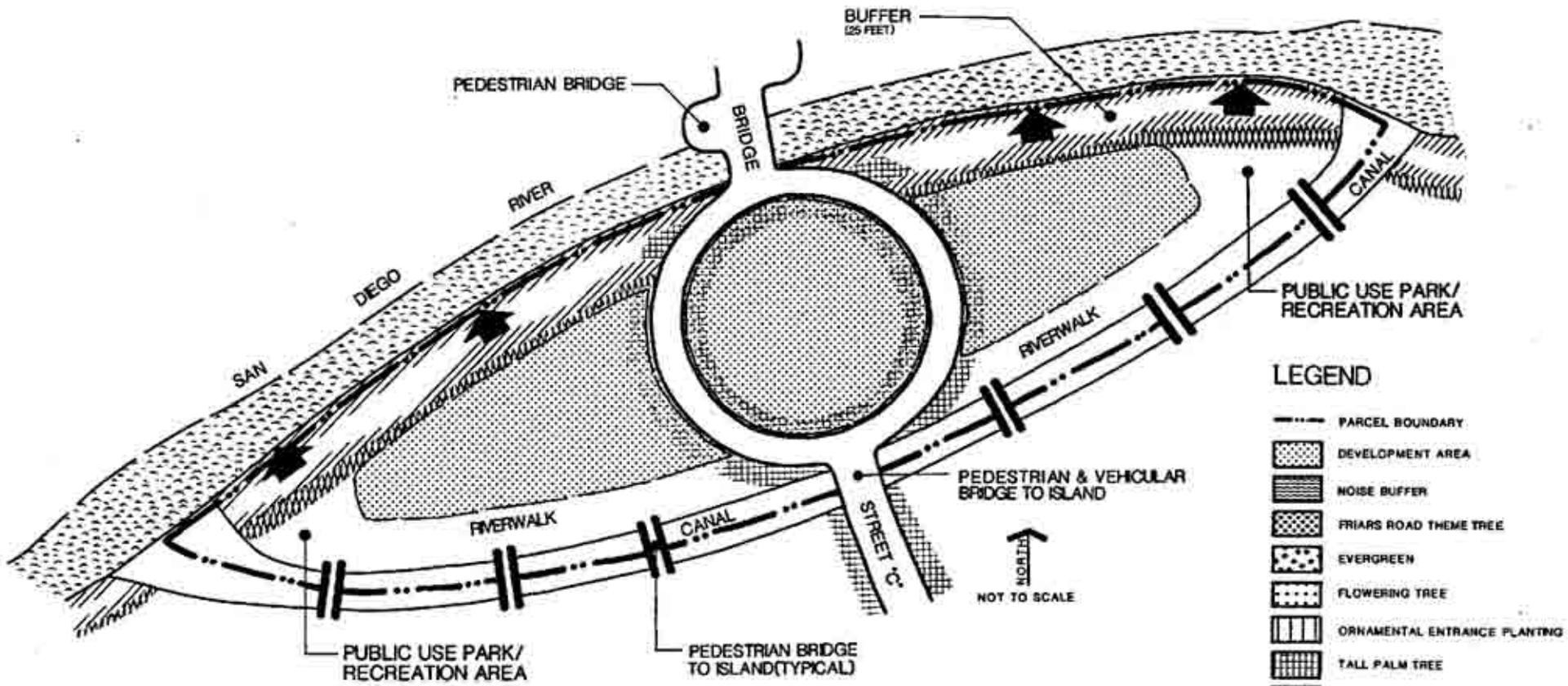
Massing of development on Parcel D must permit a through-view from I-6 to the river.

PARCEL LOCATION MAP



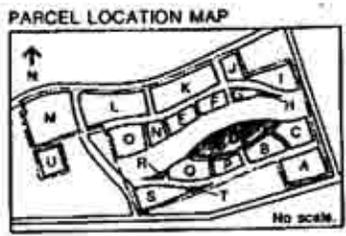
**LEVI - CUSHMAN
 SPECIFIC PLAN**

**PARCEL D
 SUMMARY MAP**



- LEGEND**
- PARCEL BOUNDARY
 - [Stippled pattern] DEVELOPMENT AREA
 - [Horizontal lines] NOISE BUFFER
 - [Cross-hatch pattern] FRIARS ROAD THEME TREE
 - [Dotted pattern] EVERGREEN
 - [Small circles] FLOWERING TREE
 - [Vertical lines] ORNAMENTAL ENTRANCE PLANTING
 - [Grid pattern] TALL PALM TREE
 - [Wavy lines] RIPARIAN VEGETATION
 - [Diagonal lines] SCREEN/SETBACK PLANTING
 - [Diagonal lines] BUFFER AREA PLANTING
 - ▲ SCREEN BREAK FOR VIEWS

NORTH
↑
NOT TO SCALE



MINIMUM LANDSCAPING: 40 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL D
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel E represents approximately 11 percent of Development Area 2.

PARCEL SIZE: 4 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: HOTEL
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 2: 17,906

SPECIAL ELEMENTS

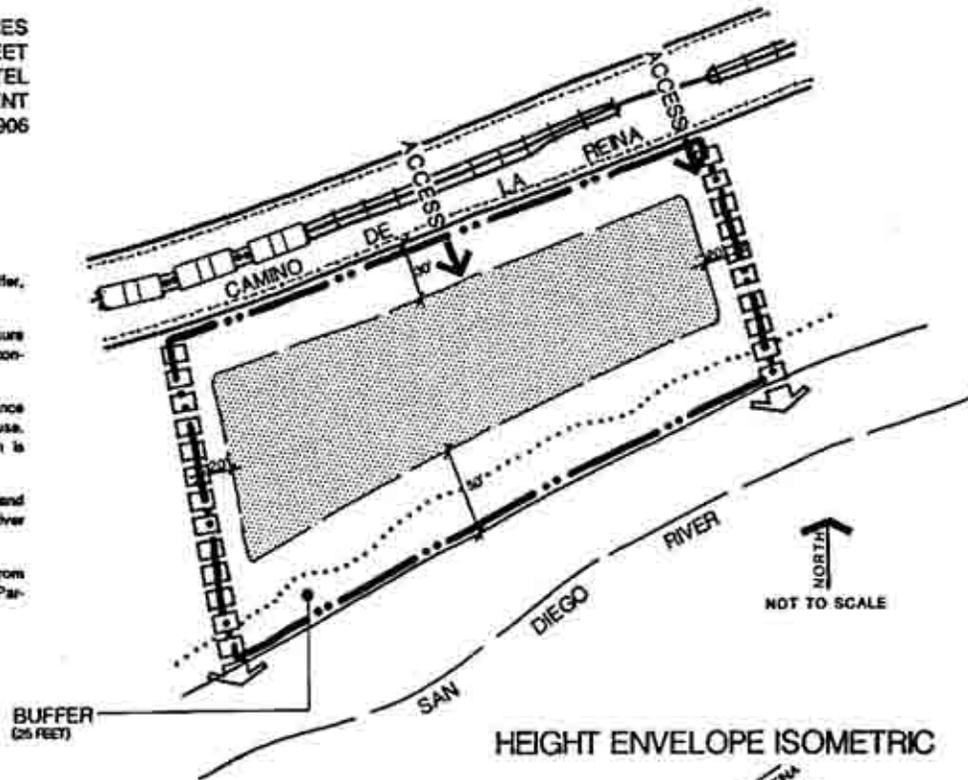
Development on Parcel E must include a river buffer, bikeways and pedestrian paths.

Coordination with Parcels N and F is necessary to ensure river buffer, pedestrian, and bike system design continuity.

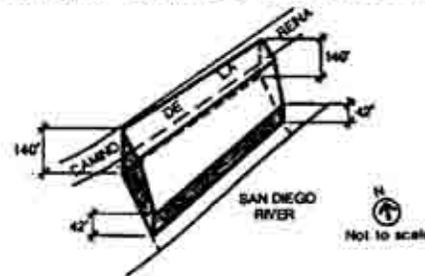
Special use and design opportunities are available since the adjacent Parcel N is dedicated to park and open use. Compatibility and continuity in planting and design is necessary between Parcel N and E.

View corridors are to be provided along both east and west borders of the parcel which terminate at the river channel.

Two through-parcel view corridors are required from Friars Road via Parcels L and K, and then through Parcels O, E, or F to the river.



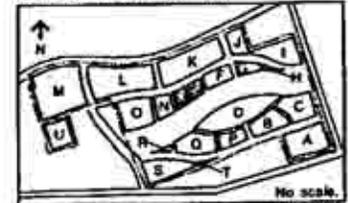
HEIGHT ENVELOPE ISOMETRIC



LEGEND

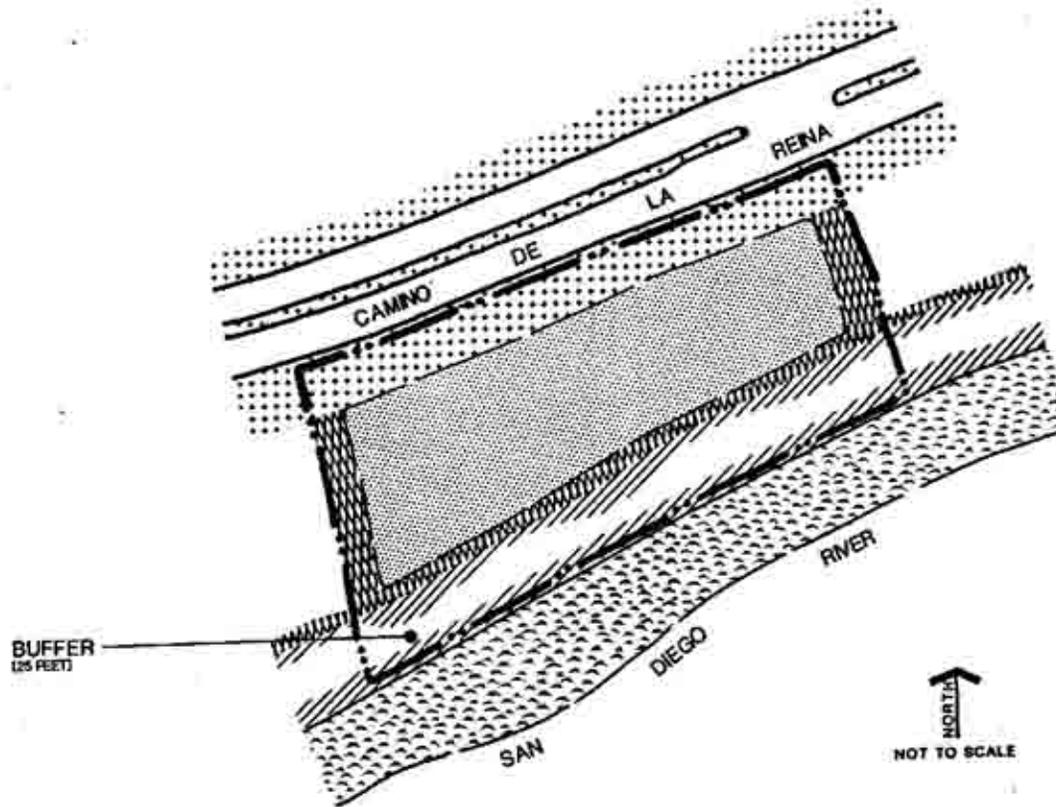
- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- BUS ROUTES
- +— LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



LEVI - CUSHMAN
 SPECIFIC PLAN

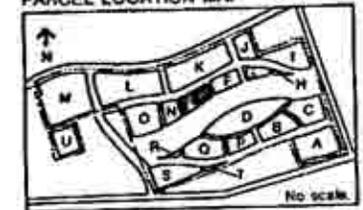
PARCEL E
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Stippled Box] DEVELOPMENT AREA
- [Horizontal Lines Box] NOISE BUFFER
- [Cross-hatch Box] FRIARS ROAD THEME TREE
- [Dotted Box] EVERGREEN
- [Dotted Box] FLOWERING TREE
- [Vertical Lines Box] ORNAMENTAL ENTRANCE PLANTING
- [Grid Box] TALL PALM TREE
- [Wavy Lines Box] RIPARIAN VEGETATION
- [Diagonal Lines Box] SCREEN/SETBACK PLANTING
- [Diagonal Lines Box] BUFFER AREA PLANTING
- ▲ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL E
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel F represents approximately 13 percent of Development Area 2.

PARCEL SIZE: 5 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: OFFICE/RETAIL
 TRANSPORTATION CENTER
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 2: 17,906

SPECIAL ELEMENTS

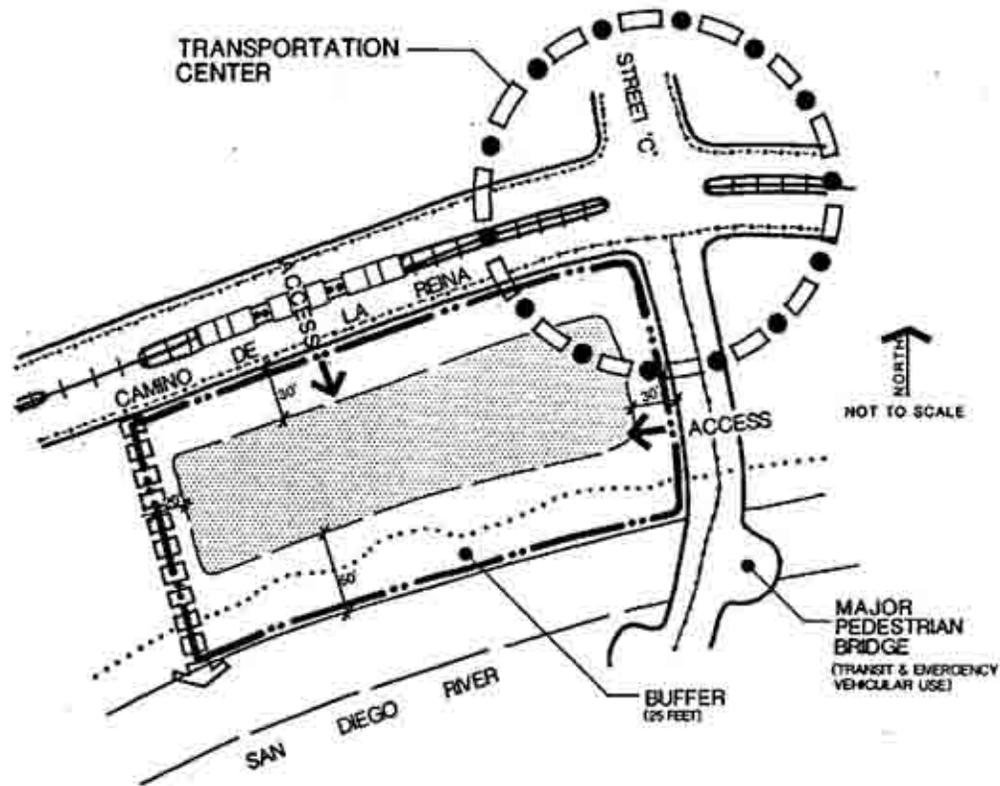
Development on Parcel F must include a river buffer, a portion of the transportation center, bikeways and pedestrian paths.

View corridors are to be provided along both east and west borders of the parcel. The view corridor on the west end of Parcel F will terminate at the river channel. The view corridor along Street C will direct views to the central pedestrian bridge.

Coordination with Parcels E and G is necessary to assure river buffer, pedestrian, and bike system design continuity. Coordination with Parcel G, J, and K is necessary to assure transportation center design continuity.

Parcel F, as a gateway to the island, is a prime area for supporting the requirement that at least 50 percent of the parking needs of the island be met by facilities off the island.

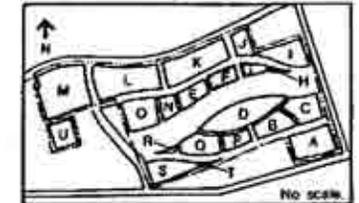
Two through-parcel view corridors are required from Friars Road via Parcels L and K, and then through Parcels O, E, or F to the river.



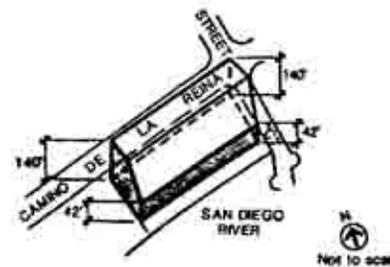
LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- +—+— LRT ROUTE
- BICYCLE PATH
- - - - - BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP

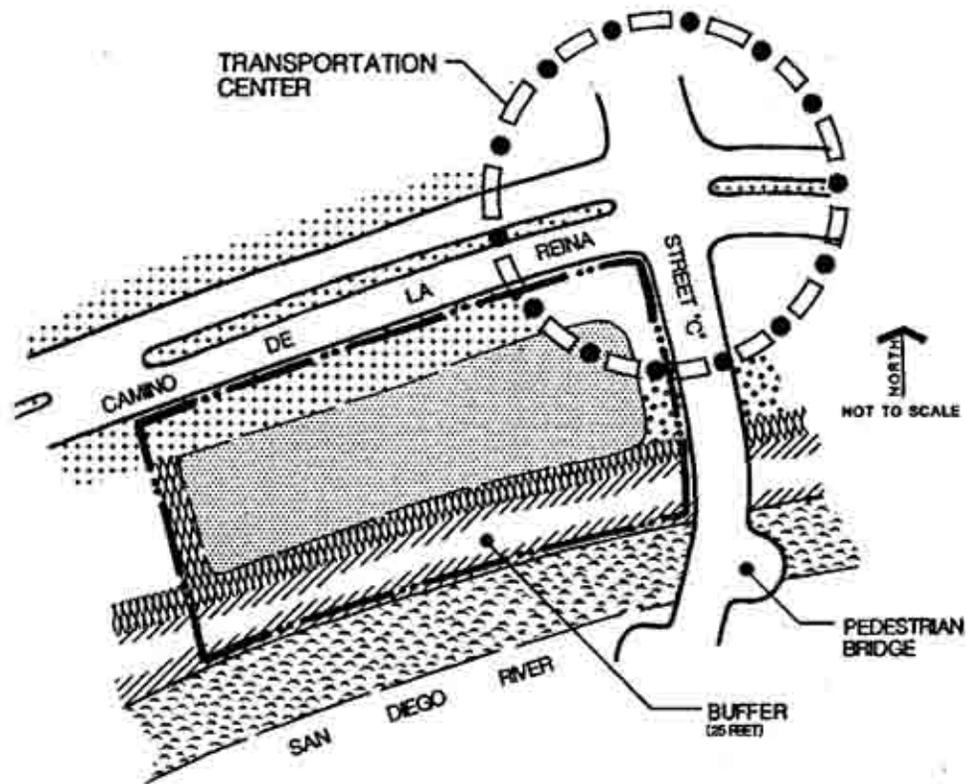


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

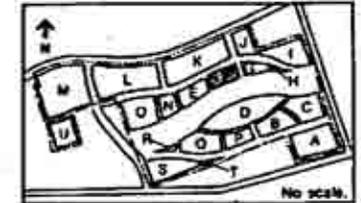
PARCEL F
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Dotted Pattern] DEVELOPMENT AREA
- [Horizontal Lines] NOISE BUFFER
- [Cross-hatch Pattern] FRIARS ROAD THEME TREE
- [Stippled Pattern] EVERGREEN
- [Dotted Pattern] FLOWERING TREE
- [Vertical Lines] ORNAMENTAL ENTRANCE PLANTING
- [Grid Pattern] TALL PALM TREE
- [Wavy Pattern] RIPARIAN VEGETATION
- [Diagonal Hatching] SCREEN/SETBACK PLANTING
- [Diagonal Hatching] BUFFER AREA PLANTING
- [Arrow] SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL F
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel G represents approximately 8 percent of Development Area 2.

PARCEL SIZE: 3 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: OFFICE/RETAIL
 TRANSPORTATION CENTER
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 2: 17,908

SPECIAL ELEMENTS

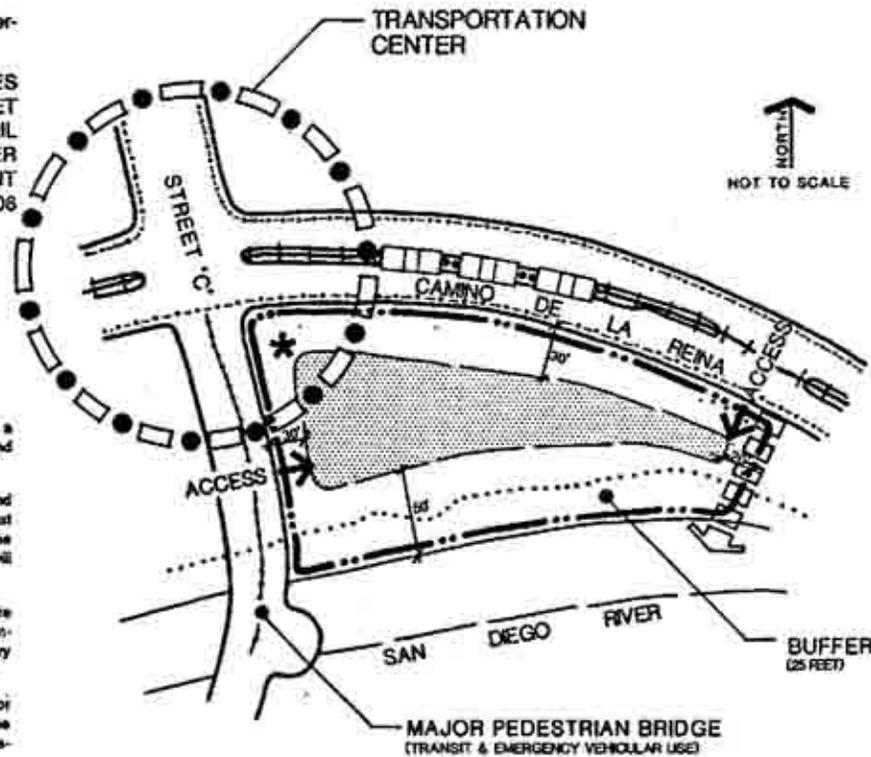
Development on Parcel G must include a river buffer, a portion of the transportation center, bikeways and pedestrian paths.

View corridors are to be provided along both east and west borders of the parcel. The view corridor on the east end of Parcel G will terminate at the river channel. The view corridor along the west end of the parcel Street C will direct views to the central pedestrian bridge.

Coordination with Parcels F and H is necessary to assure river buffer, pedestrian, and bike system design continuity. Coordination with Parcels F, J, and K is necessary to assure transportation center design continuity.

Parcel G, as a gateway to the island, is a prime area for supporting the requirement that at least 50 percent of the parking needs of the island be met by facilities off the island.

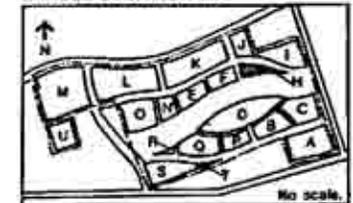
Special use and design opportunities are available because the adjacent Parcel H is dedicated to park and open use. Compatibility and continuity between Parcels G and H is particularly important at the eastern edge of Parcel G where the use of a meandering bikaped path is especially suitable.



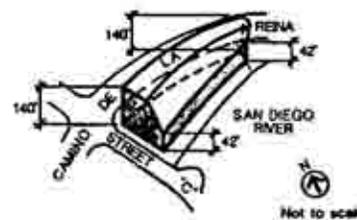
LEGEND

- PARCEL BOUNDARY
- [Hatched Box] DEVELOPMENT AREA
- [Arrow pointing up] VIEW CORRIDOR
- [Arrow pointing up] ACCESS POINTS
- [Star] RECOMMENDED BUS STOPS
- o o o o BUS ROUTES
- +--- LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP

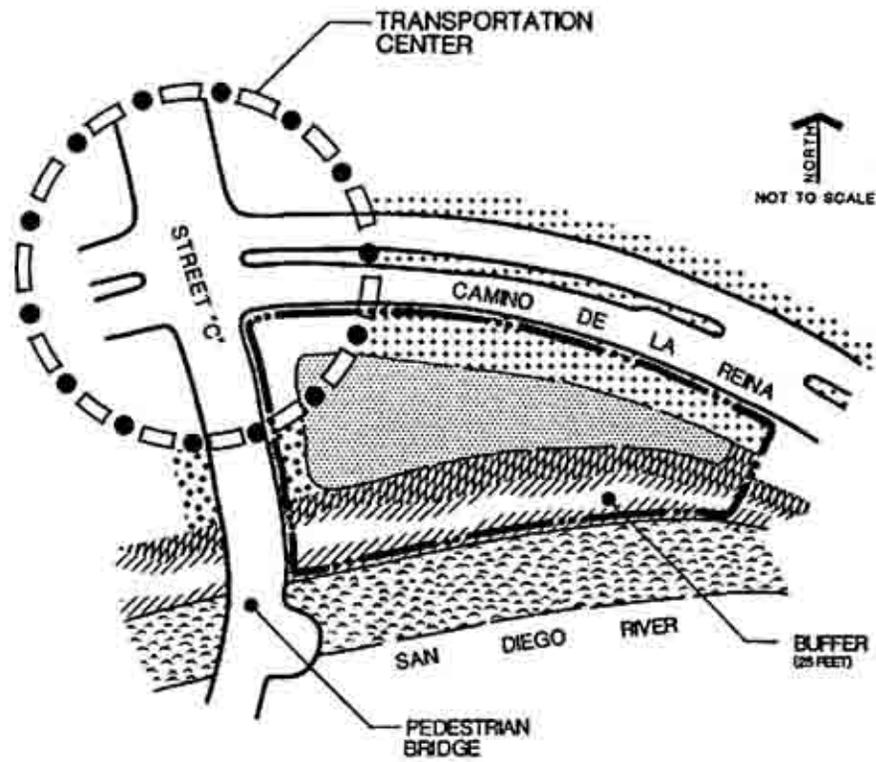


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

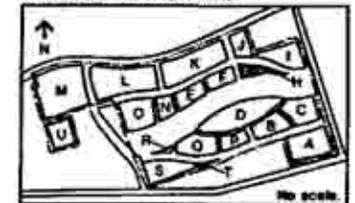
PARCEL G
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Stippled Box] DEVELOPMENT AREA
- [Horizontal Lines Box] NOISE BUFFER
- [Cross-hatch Box] FRIARS ROAD THEME TREE
- [Dotted Box] EVERGREEN
- [Dotted Box] FLOWERING TREE
- [Vertical Lines Box] ORNAMENTAL ENTRANCE PLANTING
- [Grid Box] TALL PALM TREE
- [Wavy Lines Box] RIPARIAN VEGETATION
- [Diagonal Lines Box] SCREEN/SETBACK PLANTING
- [Diagonal Lines Box] BUFFER AREA PLANTING
- ▲ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL G
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel H is part of Development Area 2.

PARCEL SIZE: 1 ACRE
 USE EMPHASIS: PARK/OPEN AREA
 ADT ALLOCATION FOR DA 2: 17,908

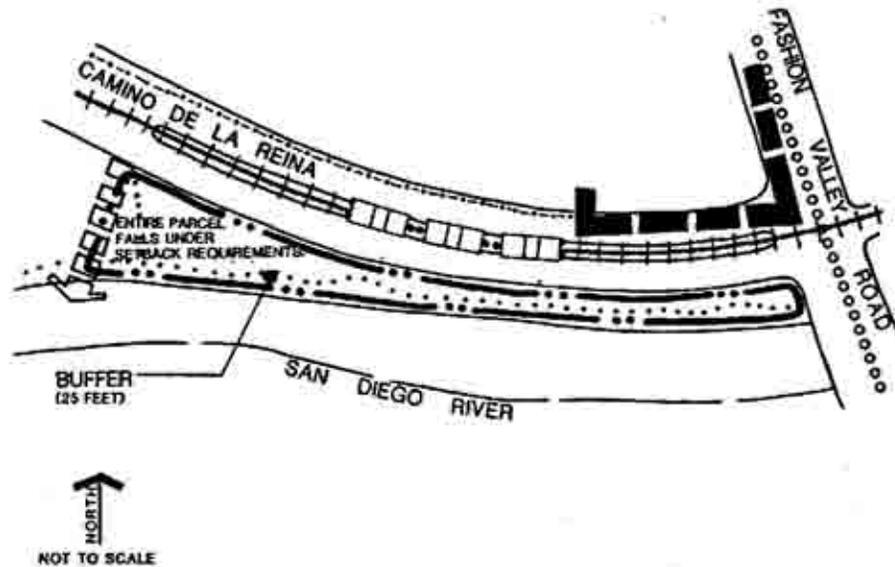
SPECIAL ELEMENTS

Location next to the San Diego River at the eastern entrance of the project provides visual prominence to Parcel H. That prominence is further emphasized by the adjacent theme entry on Parcel I and the role of Parcel H in leading to the transportation center.

Because a portion of Parcel H lies within a flood way transition area, use and development on the parcel must be jointly planned with uses in the floodway transition area of Parcel I and approved by the Floodway Management section of the City's Engineering and Development Division to assure compatibility with floodplain development standards. Height maximums do not apply since the area lies within the floodway.

Development on Parcel H must include a buffer along the river channel and a special treatment area where riparian vegetation will merge with ornamental plantings.

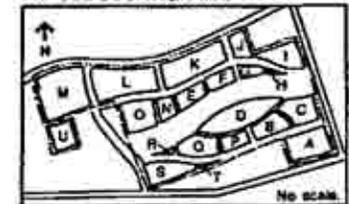
While a view corridor is shown on the western border of the parcel, the entire site actually functions as a view corridor terminating at the river channel.



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- +— LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

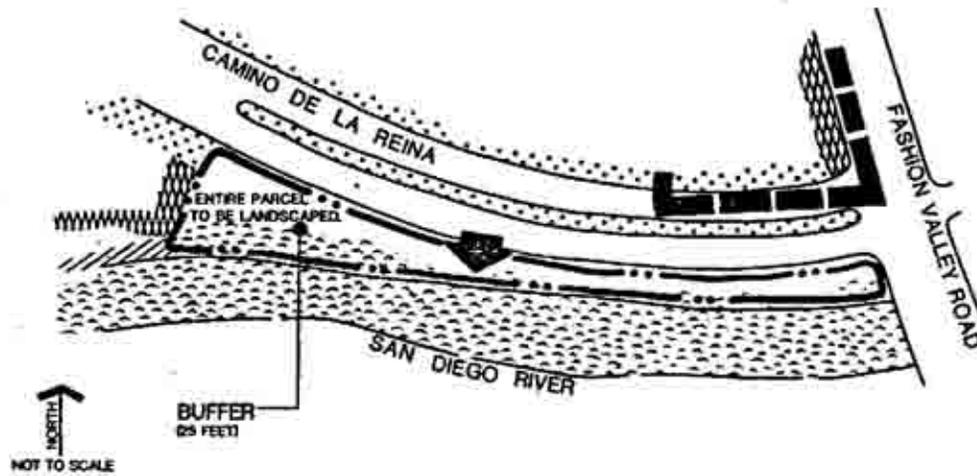
PARCEL LOCATION MAP



**LEVI - CUSHMAN
 SPECIFIC PLAN**

**PARCEL H
 SUMMARY MAP**

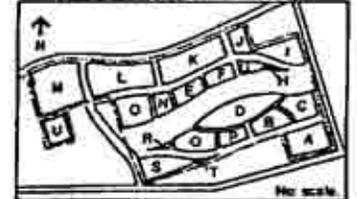
LEVI - CUSHMAN SPECIFIC PLAN



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



PARCEL H LANDSCAPE SCHEMATIC

USE CONSIDERATIONS

Parcel I represents approximately 19 percent of Development Area 2.

PARCEL SIZE: 7 ACRES
 HEIGHT MAXIMUM: 140-250 FEET
 USE EMPHASIS: OFFICE
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 2: 17,906

SPECIAL ELEMENTS

A 250-foot height maximum in combination with a location behind the open use Parcel H will give Parcel I exceptional river view opportunities which should be emphasized in project design.

Development on Parcel I must include a major theme entry, bikeways, and pedestrian paths.

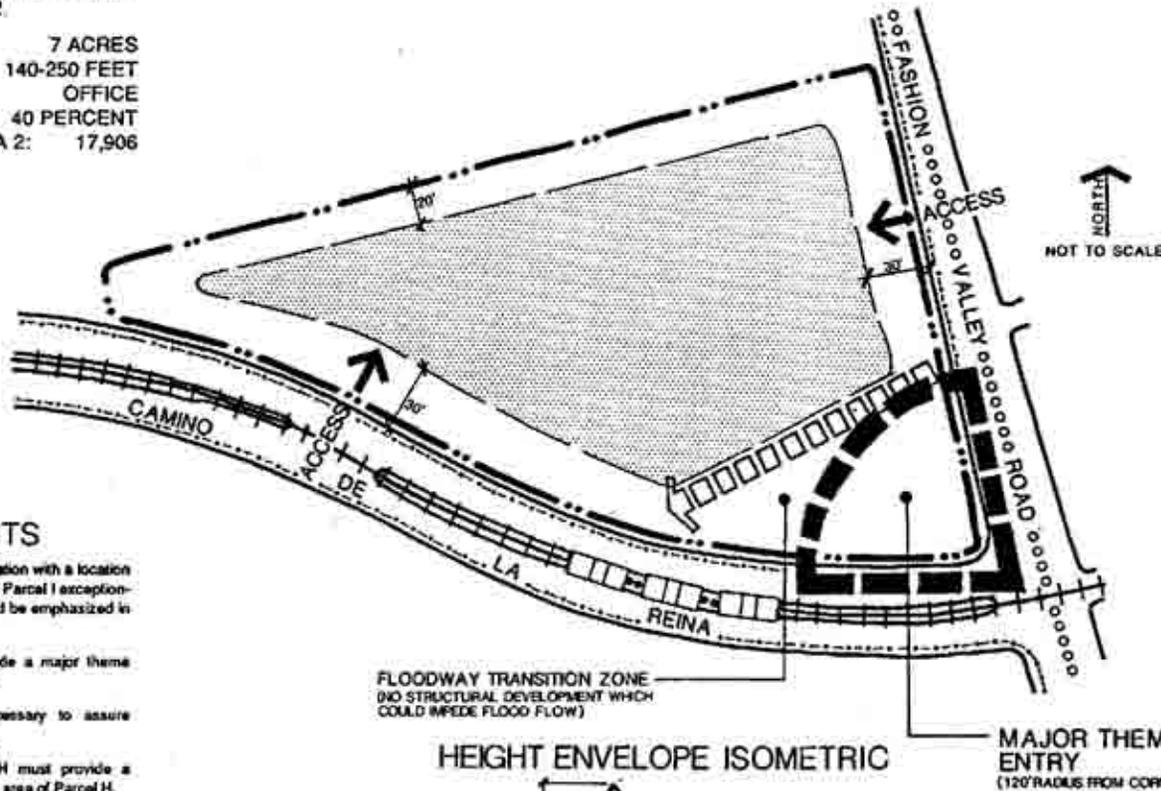
Coordination with Parcel J is necessary to assure pedestrian and bike system continuity.

Design of development on Parcel H must provide a gradual height transition from the open area of Parcel H.

Design of the major theme entry and/or other uses on the southeastern portion of the parcel in the transition area must be approved by the Floodway Management section of the City's Engineering and Development Division to assure compatibility with floodplain development standards.

Attention to project "edges" must assure a suitable transition to adjacent off-site areas.

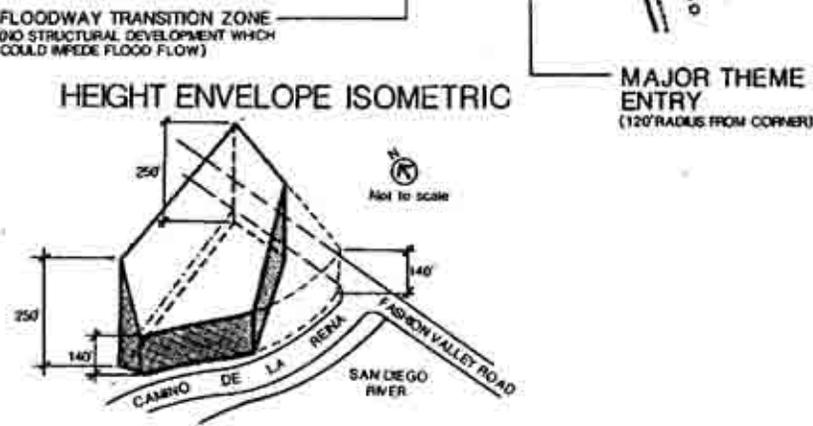
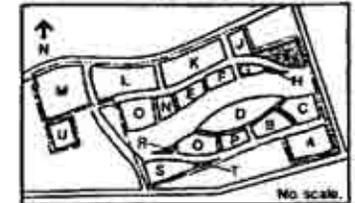
LEVI - CUSHMAN SPECIFIC PLAN



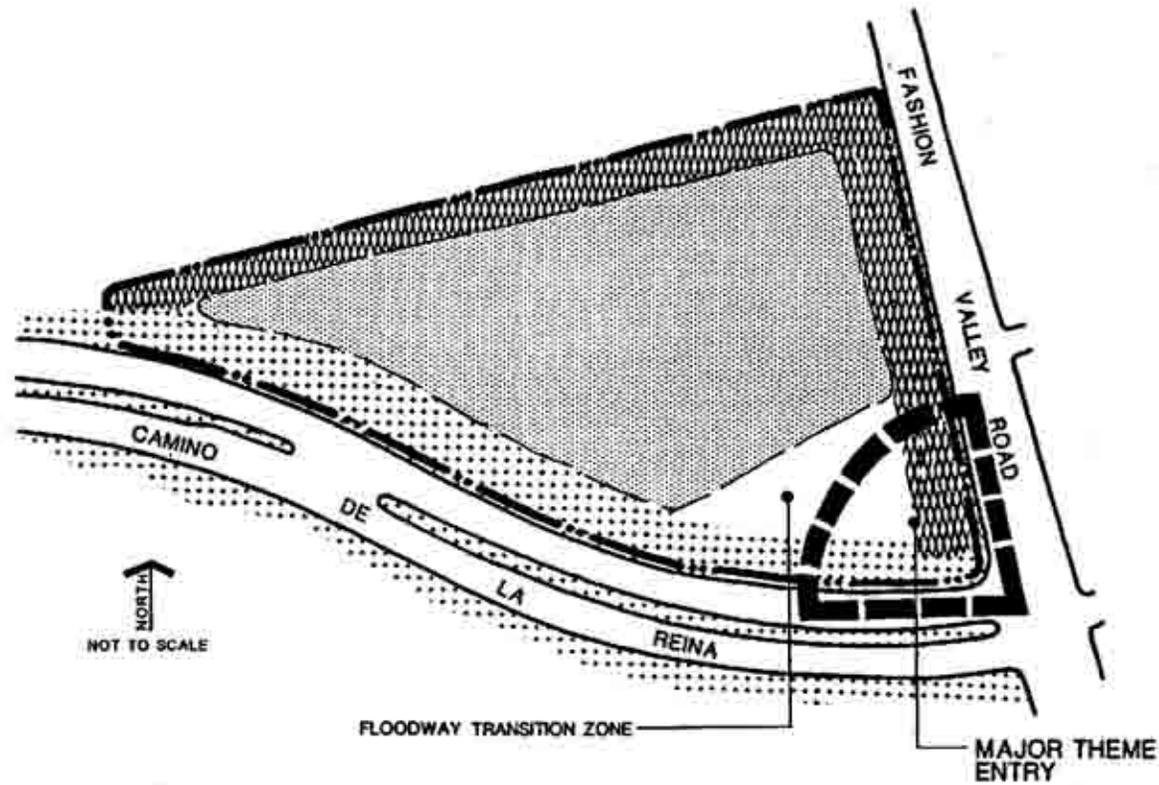
LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- + + + LRT ROUTE
- BICYCLE PATH
- · - · - BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



PARCEL I SUMMARY MAP

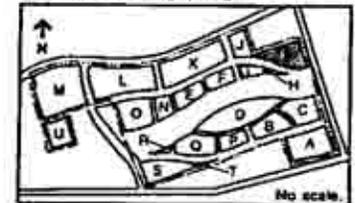


NORTH ↑
NOT TO SCALE

LEGEND

- — — — — PARCEL BOUNDARY
- [Grid Pattern] DEVELOPMENT AREA
- [Horizontal Lines] NOISE BUFFER
- [Cross-hatch Pattern] FRIARS ROAD THEME TREE
- [Dotted Pattern] EVERGREEN
- [Stippled Pattern] FLOWERING TREE
- [Vertical Lines] ORNAMENTAL ENTRANCE PLANTING
- [Vertical Lines with Dots] TALL PALM TREE
- [Wavy Pattern] RIPARIAN VEGETATION
- [Diagonal Lines] SCREEN/SETBACK PLANTING
- [Diagonal Lines with Dots] BUFFER AREA PLANTING
- ↑ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

LEVI - CUSHMAN SPECIFIC PLAN

PARCEL I LANDSCAPE SCHEMATIC

USE CONSIDERATIONS

Parcel J represents approximately 11 percent of Development Area 2.

PARCEL SIZE: 4 ACRES
 HEIGHT MAXIMUM: 140-250 FEET
 USE EMPHASIS: OFFICE/RETAIL
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 2: 17,906

SPECIAL ELEMENTS

A location on Friars Road at Street C makes Parcel J one of the principal entry areas to the entire project. Development on this site influences the perception of the entire project and must therefore clearly express LCSP themes.

Development on Parcel J must include a major theme entry, a portion of the transportation center, blueways and pedestrian paths.

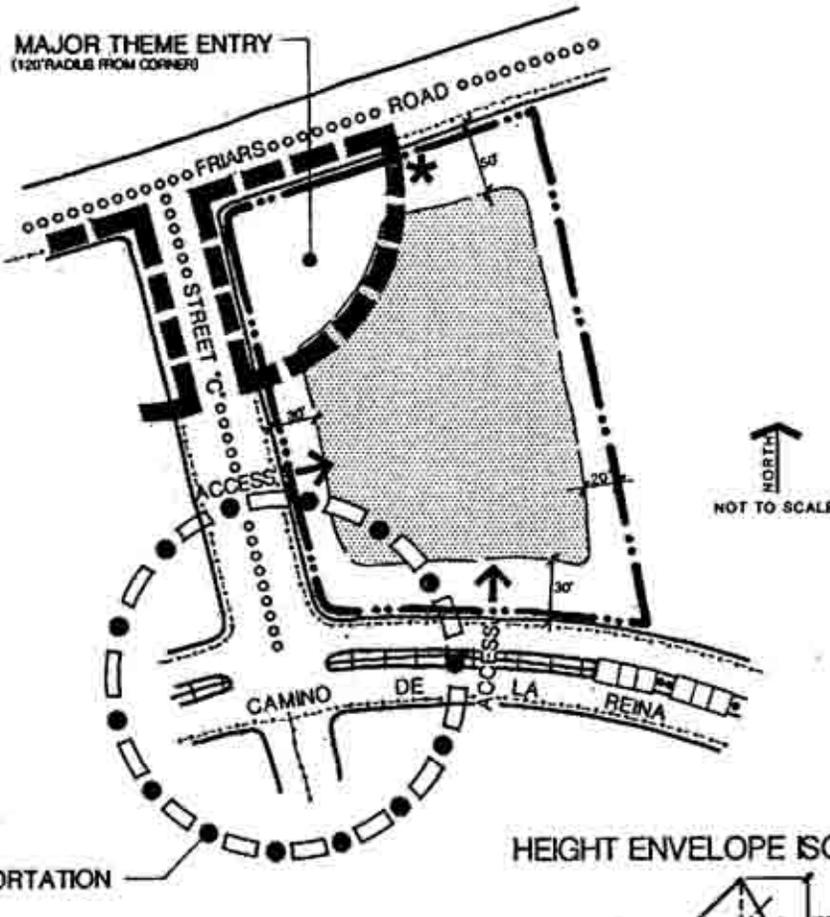
A major view corridor is to be provided at the west end of the parcel along Street C leading views through the transportation center to the central pedestrian bridge.

Design of the theme entry must be coordinated with the theme entry on Parcel K.

Coordination with Parcels F, G, and K is necessary to assure transportation center design continuity.

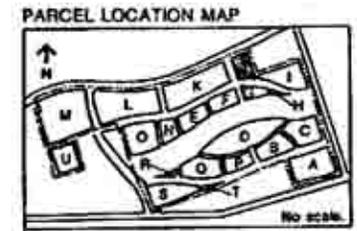
Parcel J is a prime candidate for a consolidated parking area to support a park-and-ride facility at the transportation center.

Attention must be given to project "edges" to assure that a suitable transition is made to adjacent off-site areas. Development along Friars Road shall not create a wall effect that prohibits views into the project.

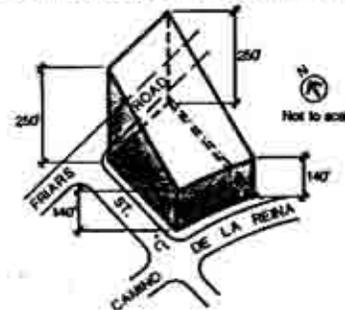


LEGEND

- PARCEL BOUNDARY
- [Hatched Box] DEVELOPMENT AREA
- [Arrow pointing up] VIEW CORRIDOR
- [Arrow pointing up] ACCESS POINTS
- [Asterisk] RECOMMENDED BUS STOPS
- o-o-o-o BUS ROUTES
- +--- LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

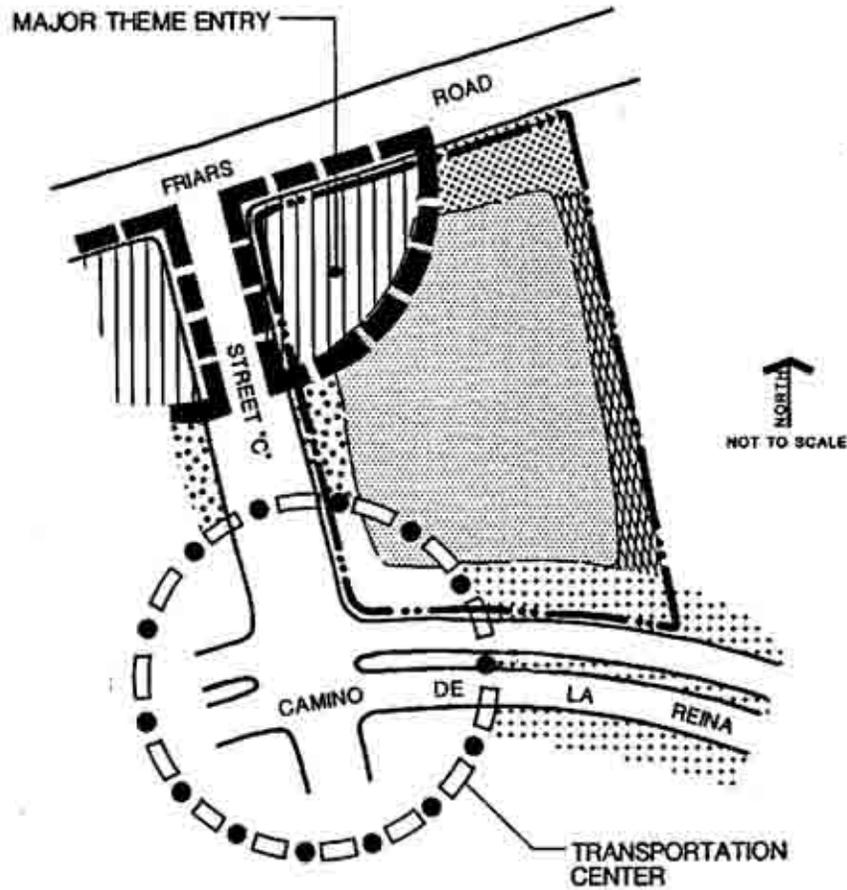


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

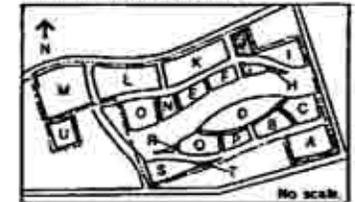
PARCEL J
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

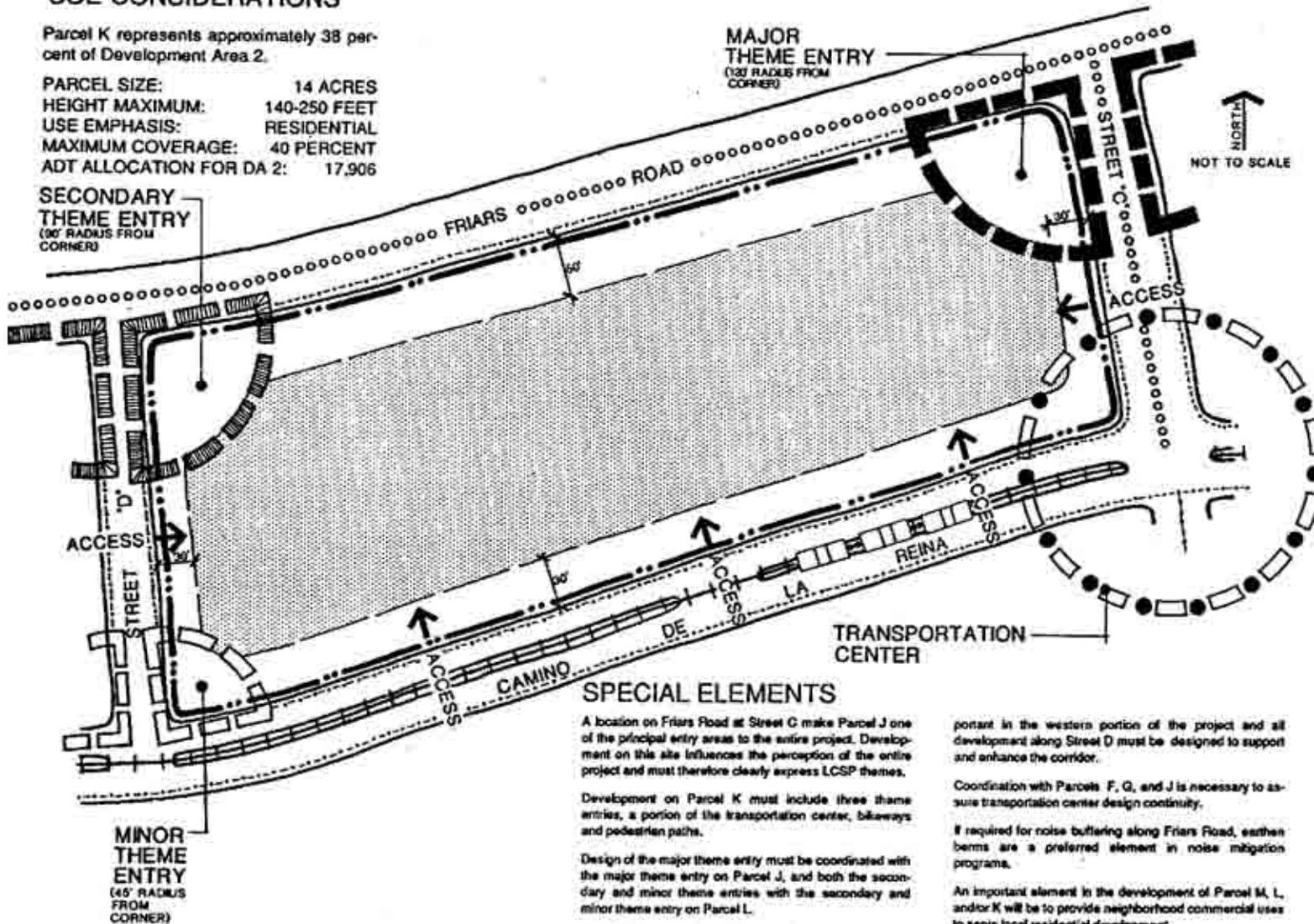
**PARCEL J
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel K represents approximately 38 percent of Development Area 2.

PARCEL SIZE: 14 ACRES
 HEIGHT MAXIMUM: 140-250 FEET
 USE EMPHASIS: RESIDENTIAL
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 2: 17,906

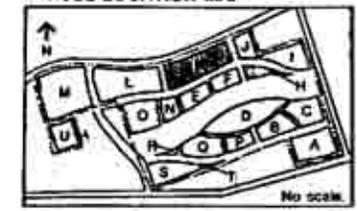
SECONDARY
 THEME ENTRY
 (90° RADIUS FROM
 CORNER)



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- BUS ROUTES
- +— LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



SPECIAL ELEMENTS

A location on Friars Road at Street G make Parcel J one of the principal entry areas to the entire project. Development on this site influences the perception of the entire project and must therefore clearly express LCSP themes.

Development on Parcel K must include three theme entries, a portion of the transportation center, bikeways and pedestrian paths.

Design of the major theme entry must be coordinated with the major theme entry on Parcel J, and both the secondary and minor theme entries with the secondary and minor theme entry on Parcel L.

A major view corridor is to be provided at the east end of the parcel along Street C which directs views through the transportation center on to the central pedestrian bridge. Another major view corridor is to be provided at the west end of the parcel along Street D which directs views into the park setting of Parcel N and, ultimately, to the river channel. This view corridor along Street D is the most im-

portant in the western portion of the project and all development along Street D must be designed to support and enhance the corridor.

Coordination with Parcels F, G, and J is necessary to assure transportation center design continuity.

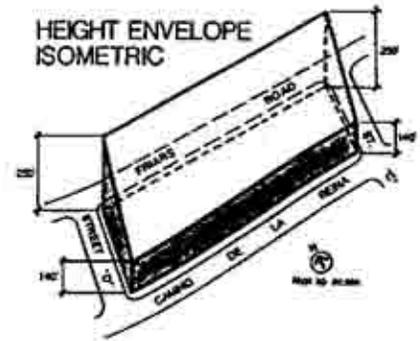
If required for noise buffering along Friars Road, earthen berms are a preferred element in noise mitigation programs.

An important element in the development of Parcel M, L, and/or K will be to provide neighborhood commercial uses to serve local residential development.

Development along Friars Road shall not create a wall effect that prohibits views into the project.

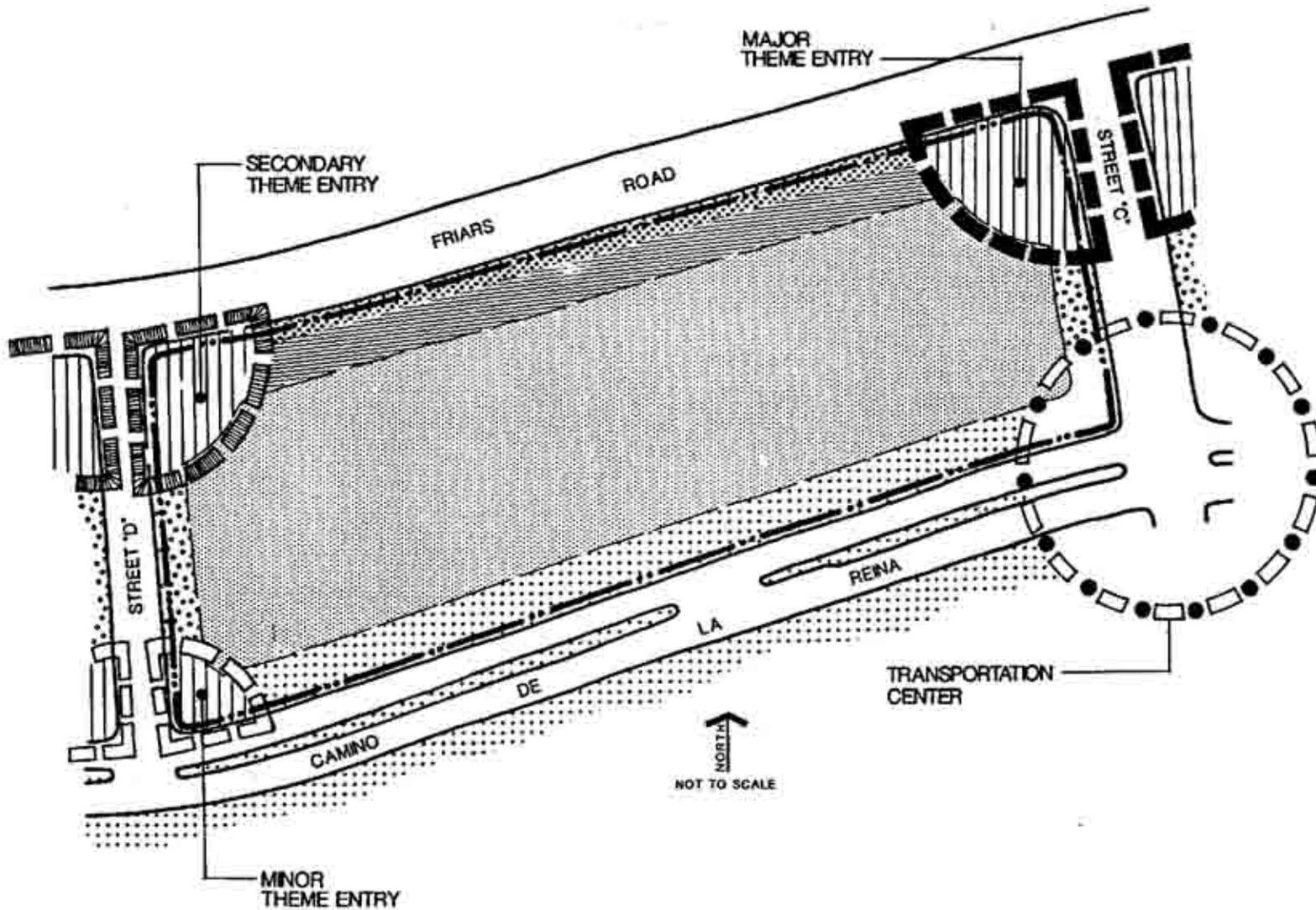
Two through-parcel view corridors are required from Friars Road via Parcels L and K, and then through Parcels O, E, or F to the river.

HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN SPECIFIC PLAN

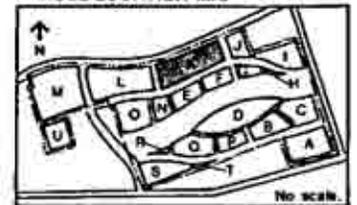
PARCEL K SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

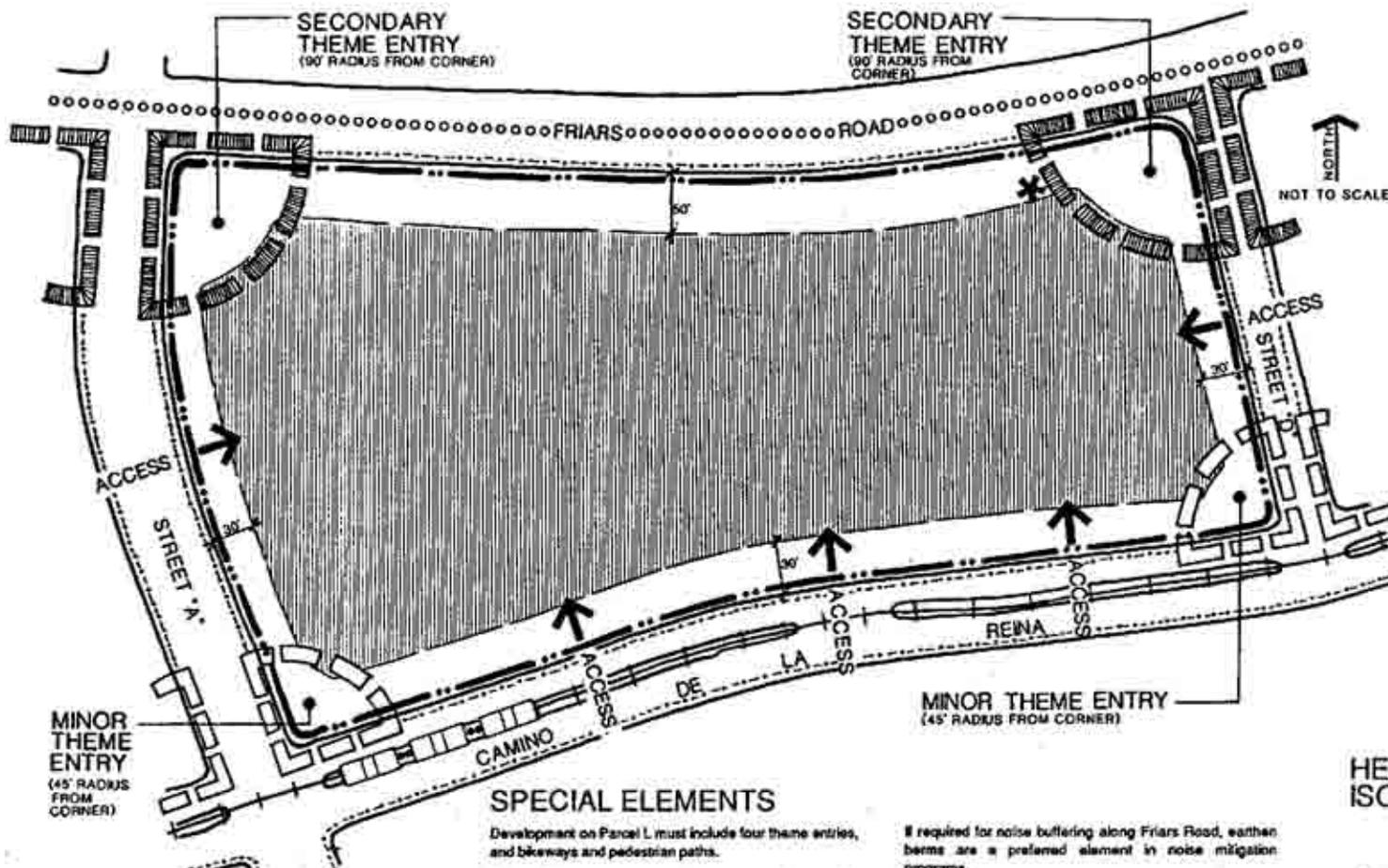
PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

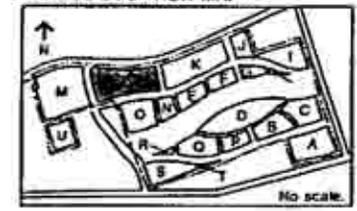
**PARCEL K
LANDSCAPE
SCHEMATIC**



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- BUS ROUTES
- +— LRT ROUTE
- BICYCLE PATH
- .-.- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



USE CONSIDERATIONS

Parcel L represents approximately 21 percent of Development Area 3.

PARCEL SIZE: 15 ACRES
 HEIGHT MAXIMUM: 250 FEET
 USE EMPHASIS: RESIDENTIAL
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

**LEVI - CUSHMAN
 SPECIFIC PLAN**

SPECIAL ELEMENTS

Development on Parcel L must include four theme entries, and bikeways and pedestrian paths.

Design of the major and secondary theme entries must be coordinated with the secondary theme entries on Parcels M and K, and the minor theme entries with the minor theme entries on Parcels M and K.

View corridors are to be provided adjacent to Streets A and D. A major view corridor runs along the east end of the parcel along Street D which directs views into the park setting of Parcel N and, ultimately, to the river channel. This view corridor along Street D is the most important in the western portion of the project and all development along Street D must be designed to support and enhance the corridor. The other view corridor is along Street A. Its view terminus will be at the river in an area outside the project boundaries.

If required for noise buffering along Friars Road, earthen berms are a preferred element in noise mitigation programs.

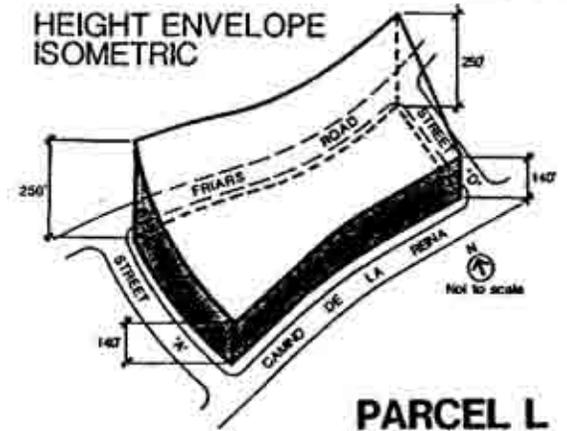
An important element in the development of Parcel M, L, and/or K will be to provide neighborhood commercial uses to serve local residential development.

Attention must be given to the southwest project "edge" to assure that a suitable transition is made to adjacent off-site areas.

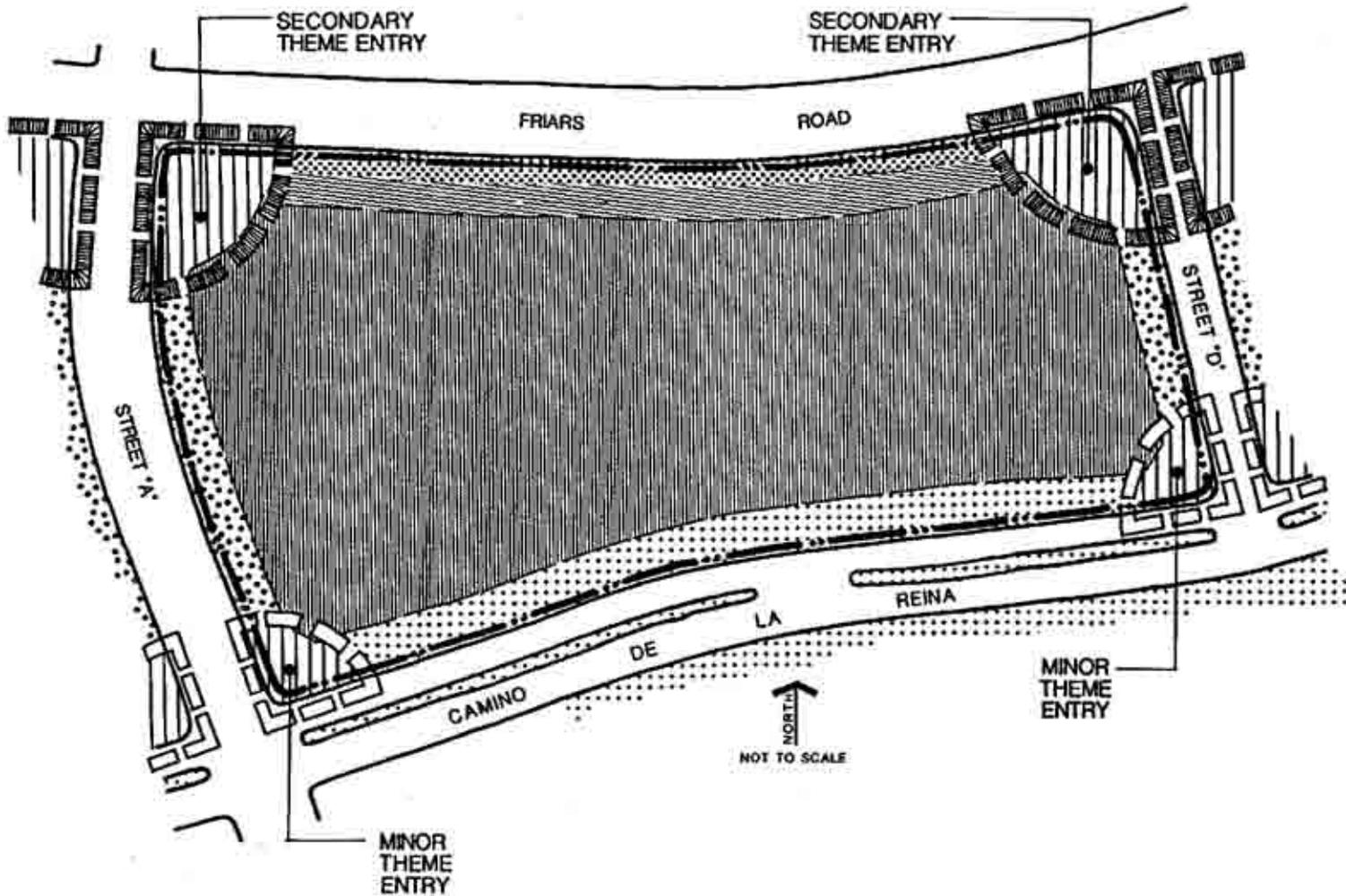
Development along Friars Road shall not create a wall effect that prohibits views into the project.

Two through-parcel view corridors are required from Friars Road via Parcels L and K, and then through Parcels O, E, or F to the river.

HEIGHT ENVELOPE ISOMETRIC



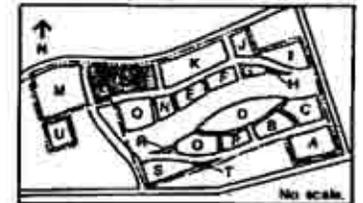
**PARCEL L
 SUMMARY MAP**



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL L
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel M represents approximately 23 percent of Development Area 3.

PARCEL SIZE: 17 ACRES
 HEIGHT MAXIMUM: 140-250 FEET
 USE EMPHASIS: RESIDENTIAL
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Development on Parcel M must be compatible with existing residential development to the west.

Development on Parcel M must include theme entries, bikeways, and pedestrian paths. A bus stop is proposed on Friars Road near the intersection with Street A. Coordination with Parcels L and U is necessary to assure pedestrian and bike system continuity.

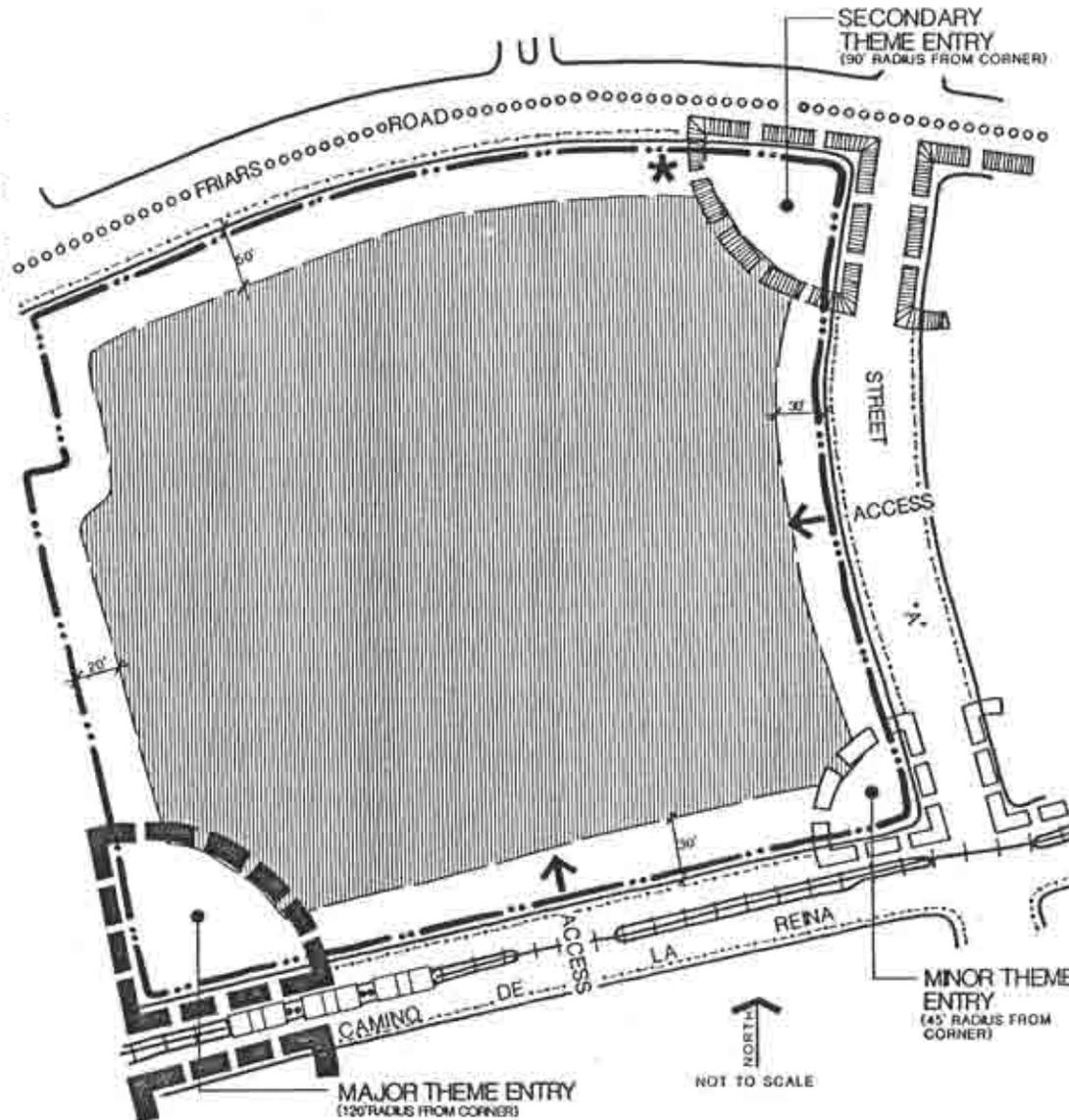
Design of the major theme entry must be coordinated with the major theme entry on Parcel U, the secondary theme entry with the secondary theme entry on Parcel L, and the minor theme entry with the minor theme entry on Parcel L.

If required for noise buffering along Friars Road, earthen berms are a preferred element in noise mitigation programs.

A view corridor along Street A terminates at the river in an area outside the project boundaries.

An important element in the development of Parcel M, L, and/or K will be to provide neighborhood commercial uses to serve local residential development.

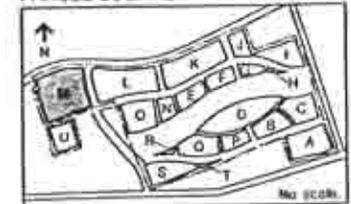
Attention must be given to the project "edges" to assure that a suitable transition is made to adjacent off-site areas. Development along Friars Road shall not create a wall effect that prohibits views into the project.



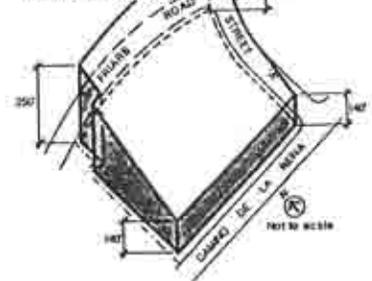
LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- +—+— LRT ROUTE
- ⋯ BICYCLE PATH
- - - BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP

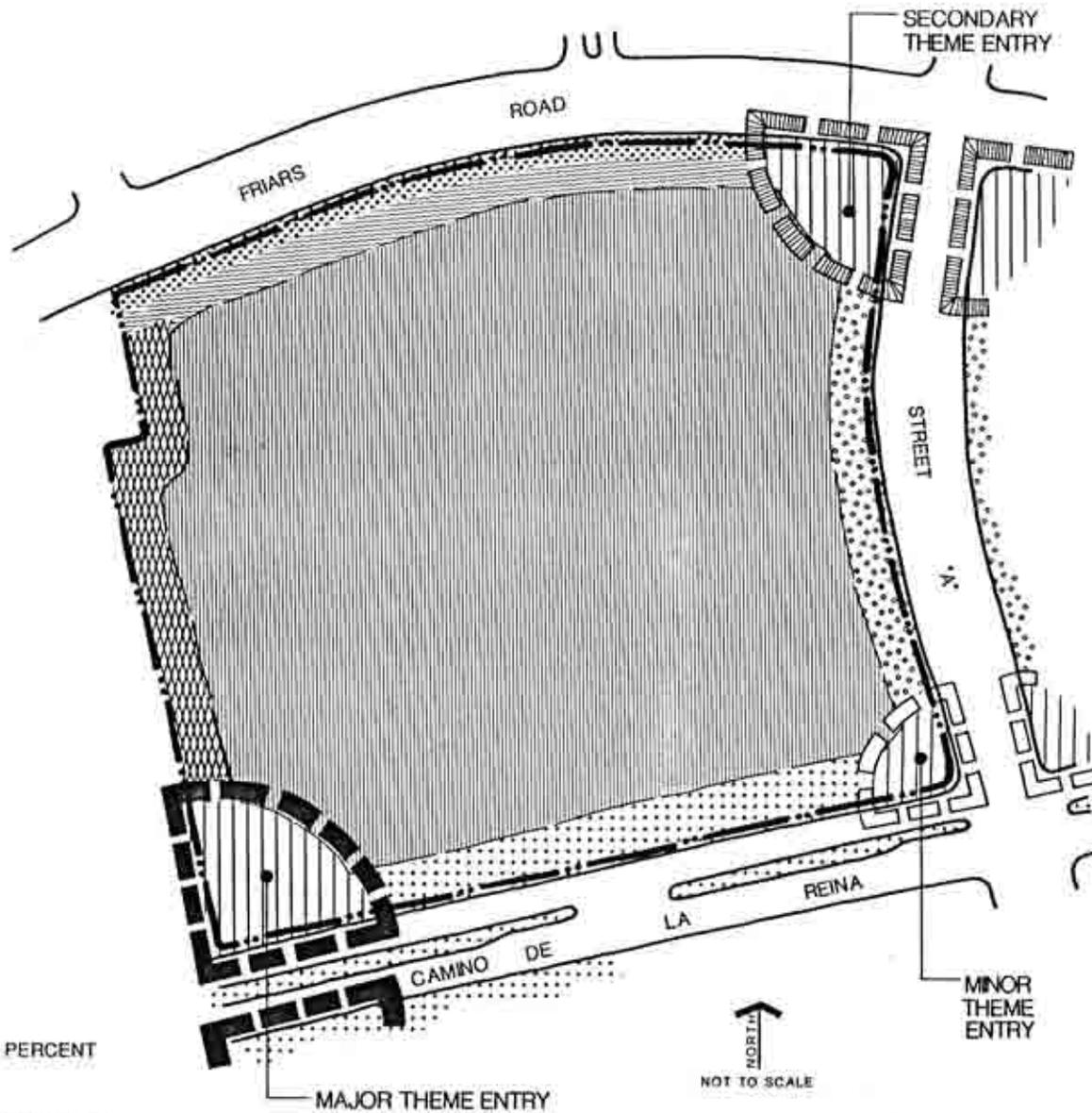


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

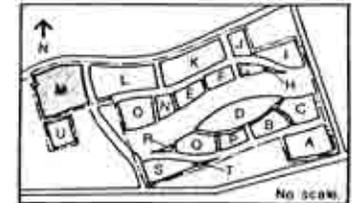
PARCEL M
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL M
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel N is part of Development Area 3.

PARCEL: 3 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: PARK/OPEN AREA
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Parcel N is the largest area devoted exclusively to park/open use within the entire project. Views from Friars Road along Street D will lead into Parcel N and the vegetative character established here will influence vegetative choices and development opportunities on bordering Parcels K, L, O, and E.

Development on Parcel N must include the river buffer, bikeways, and pedestrian paths.

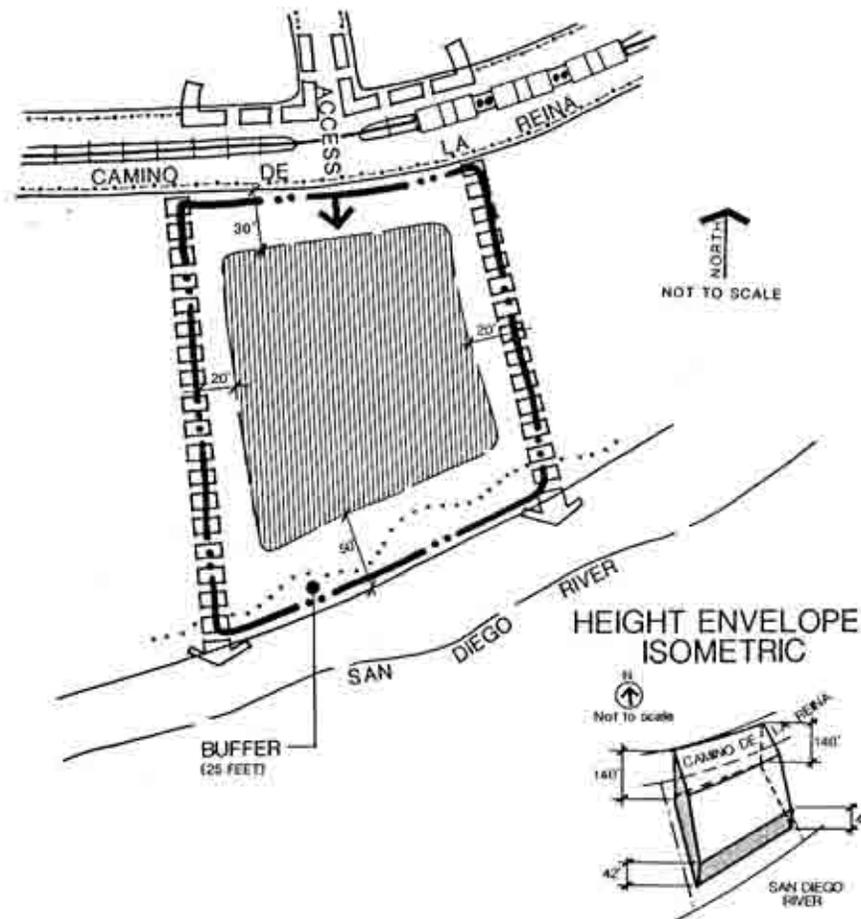
Coordination with Parcels K, L, O, and E is necessary to assure river buffer, pedestrian, and bike system design continuity.

View corridors are to be provided along both east and west borders of the parcel, both of which will terminate in the river channel.

As a designated special treatment area where riparian vegetation will merge with ornamental plantings, Parcel N is especially suitable for meandering bike and pedestrian paths.

Both active and passive recreational opportunities may be provided within the parcel, with views into the river channel emphasized.

Development must meet or exceed Park Department standards.



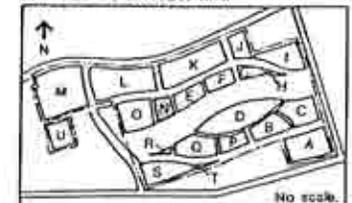
HEIGHT ENVELOPE ISOMETRIC

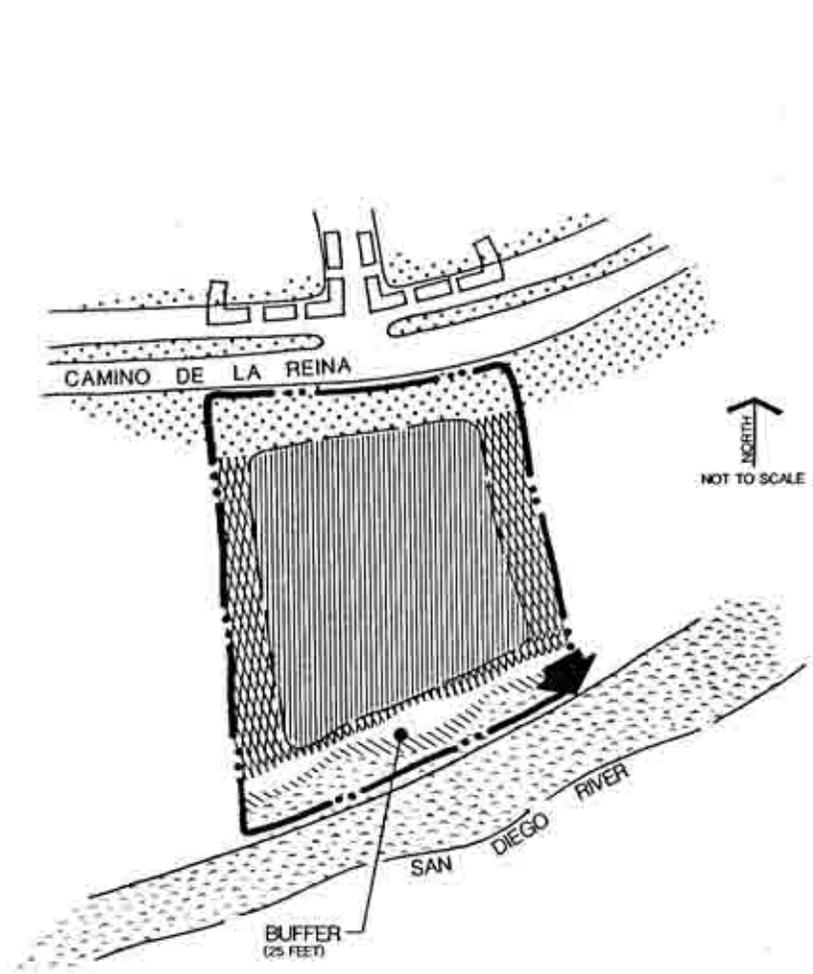


LEGEND

- PARCEL BOUNDARY
- PARK/OPEN AREA
- VIEW CORRIDOR
- ACCESS POINTS
- RECOMMENDED BUS STOPS
- BUS ROUTES
- LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP

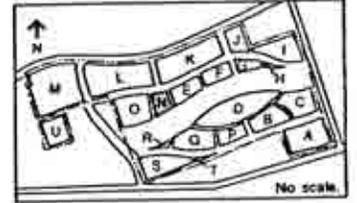




LEGEND

- PARCEL BOUNDARY
- PARK/OPEN AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI – CUSHMAN
SPECIFIC PLAN**

**PARCEL N
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel O represents approximately 13 percent of Development Area 3.

PARCEL SIZE: 9 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: RESIDENTIAL
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Development on Parcel O must include a river buffer, bikeways and pedestrian paths.

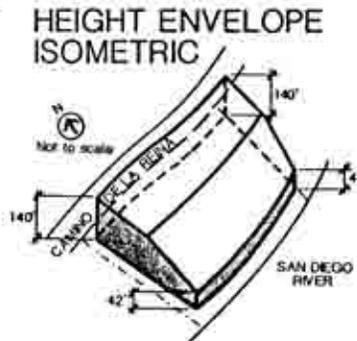
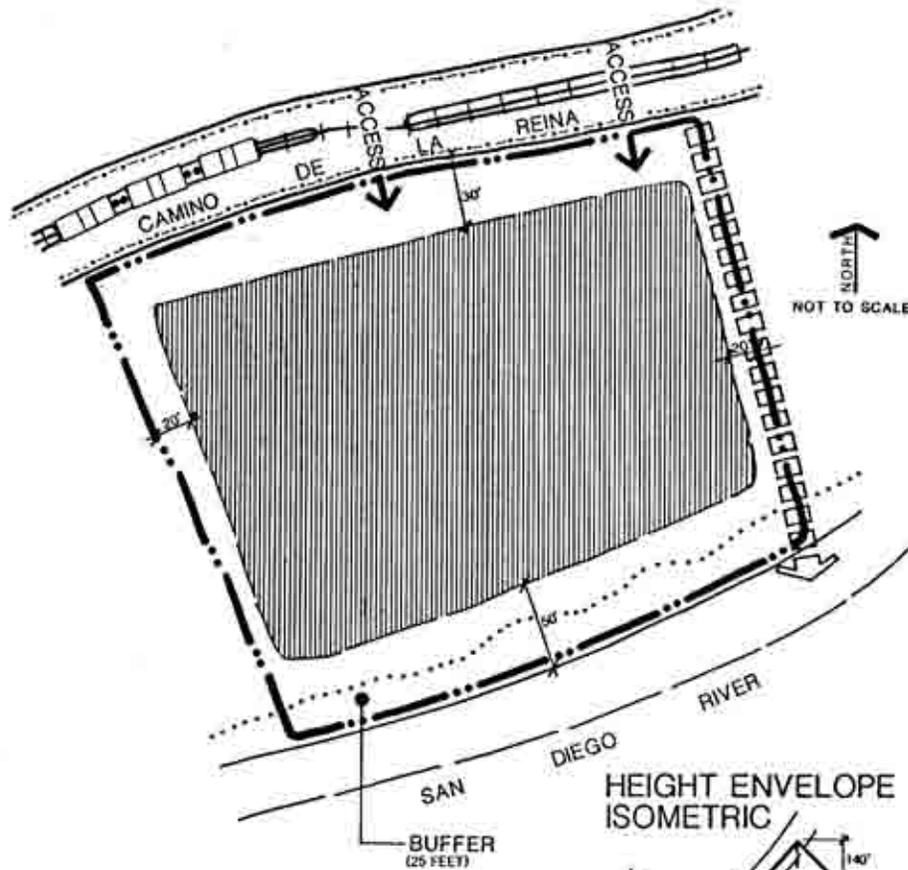
A view corridor is to be provided along the eastern border of the parcel which will terminate at the river channel.

Special use and design opportunities are available since the adjacent Parcel N is dedicated to park and open use. Compatibility and continuity in planting and design is necessary between Parcel O and N.

Coordination with Parcel L and N is necessary to assure river buffer, pedestrian, and bike system design continuity.

Attention must be given to the project "edges" to assure that a suitable transition is made to adjacent off-site areas.

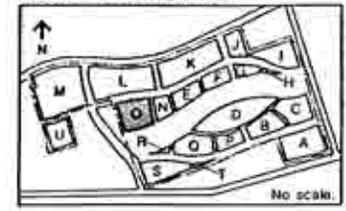
Two through-parcel view corridors are required from Friars Road via Parcels L and K, and then through Parcels O, E, or F to the river.



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- ++ LRT ROUTE
- BICYCLE PATH
- - - - BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



USE CONSIDERATIONS

Parcel P represents approximately 5 percent of Development Area 3.

PARCEL SIZE: 4 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: OFFICE/RETAIL
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

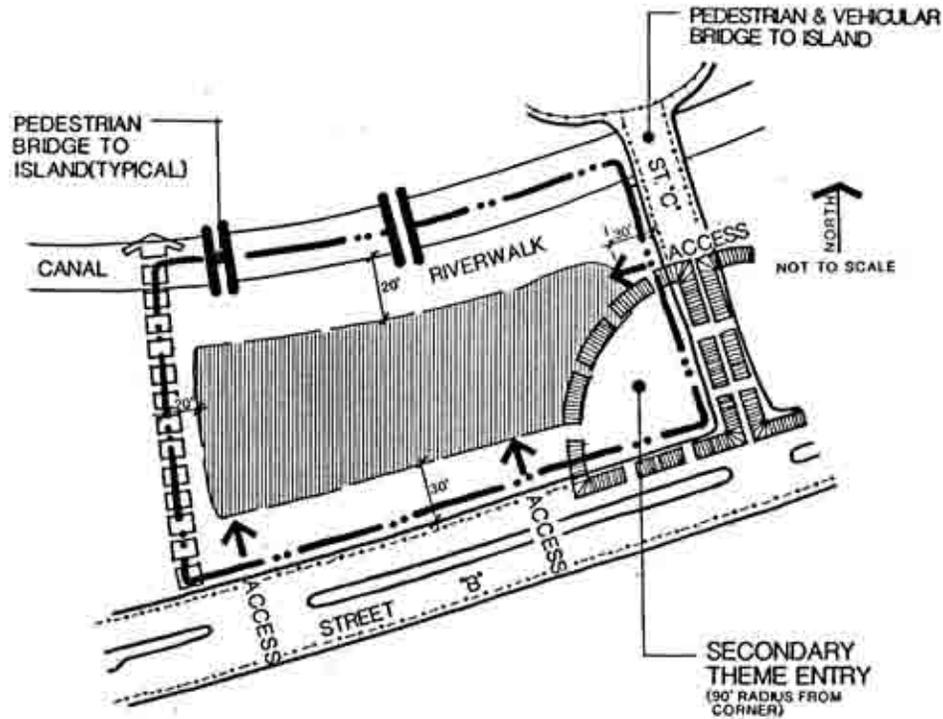
SPECIAL ELEMENTS

Development on Parcel P must include a riverwalk along the canal, pedestrian bridge(s) to the island, pedestrian and vehicular access via Street C to the island, and parking garages to accommodate vehicles destined for the island.

Coordination with Parcels B, D, and Q is necessary to assure bridge, riverwalk, pedestrian, and bike system design continuity.

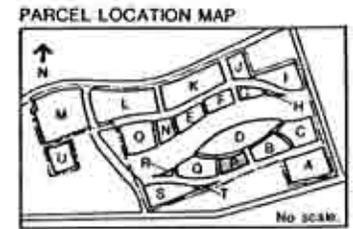
Design of the secondary theme entry must be coordinated with the theme entry design on Parcel B.

Views corridors to the island must be established along both Street C and the western parcel boundary. Views are to have specific terminations such as the theme tower, a park, or outdoor sculpture.

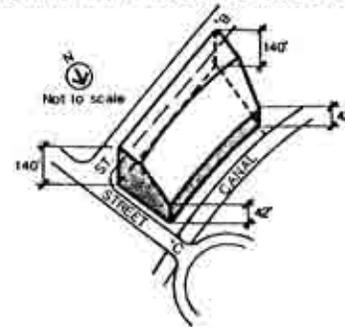


LEGEND

- PARCEL BOUNDARY
- [Hatched Box] DEVELOPMENT AREA
- [Arrow pointing up] VIEW CORRIDOR
- [Arrow pointing up] ACCESS POINTS
- [Star symbol] RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- [Line with cross-ticks] LRT ROUTE
- [Dotted line] BICYCLE PATH
- [Line with dots] BICYCLE LANE
- [Line with dashes] BICYCLE ROUTE

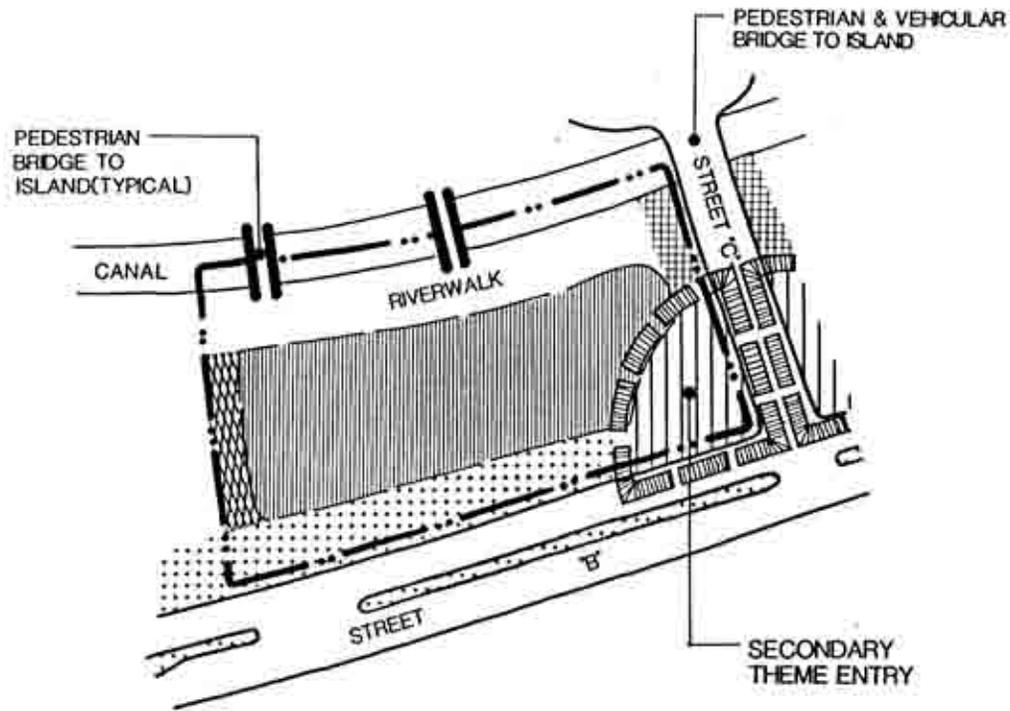


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

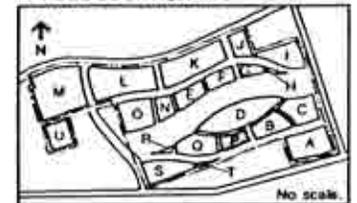
PARCEL P
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Vertical lines] DEVELOPMENT AREA
- [Horizontal lines] NOISE BUFFER
- [Cross-hatch] FRIARS ROAD THEME TREE
- [Dotted] EVERGREEN
- [Small circles] FLOWERING TREE
- [Vertical lines with dots] ORNAMENTAL ENTRANCE PLANTING
- [Grid] TALL PALM TREE
- [Wavy lines] RIPARIAN VEGETATION
- [Diagonal lines] SCREEN/SETBACK PLANTING
- [Diagonal lines with dots] BUFFER AREA PLANTING
- ▲ SCREEN BREAK FOR VIEWS

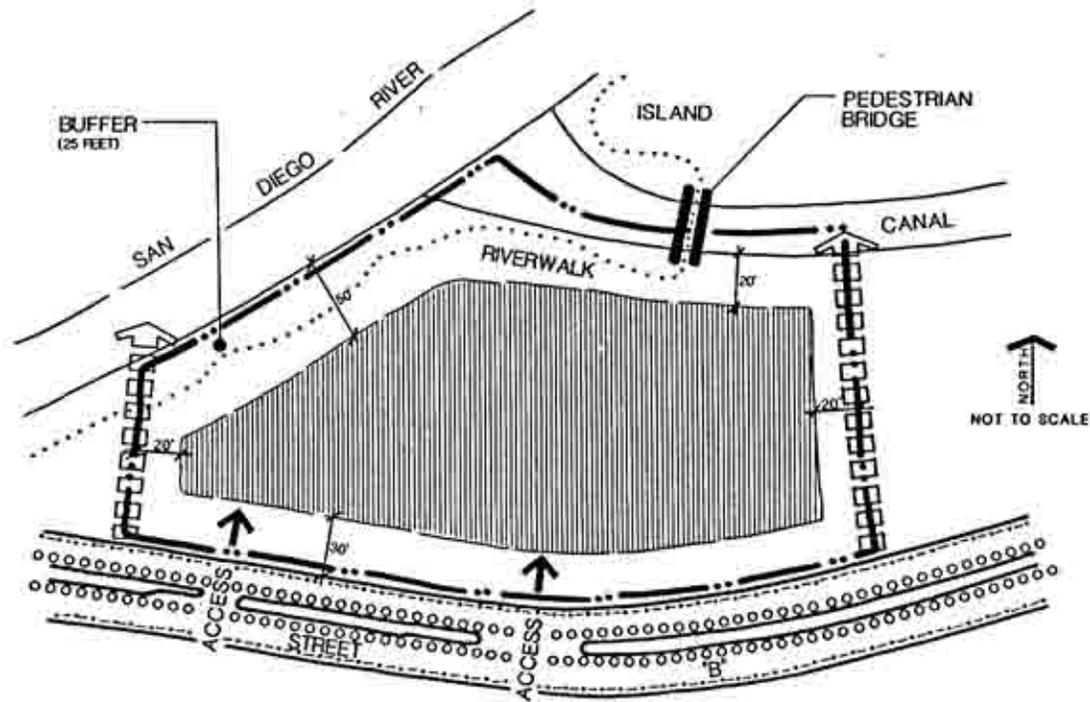
PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI – CUSHMAN
SPECIFIC PLAN**

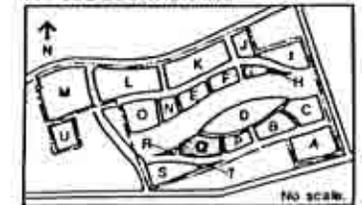
**PARCEL P
LANDSCAPE
SCHEMATIC**



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- +— LRT ROUTE
- ⋯ BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP



USE CONSIDERATIONS

Parcel Q represents approximately 8 percent of Development Area 3.

PARCEL SIZE: 6 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: RETAIL/HOTEL
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Development on Parcel Q must include a riverwalk along the canal, pedestrian bridge(s) to the island, a buffer along the river channel, and bikeways and pedestrian paths.

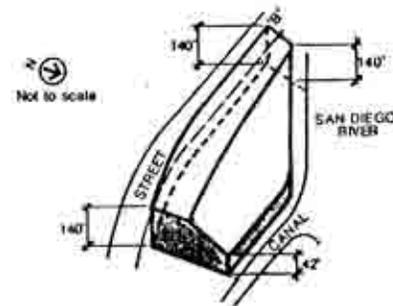
Coordination with Parcels D, P, and R is necessary to assure bridge, riverwalk, buffer, pedestrian, and bike system design continuity.

The open use area in the adjacent Parcel H provides opportunity for a meandering anbike/ped path and use of native and ornamental vegetation especially in the western part of Parcel Q.

Special design attention is necessary as the riverwalk merges with buffer at northeastern portion of parcel.

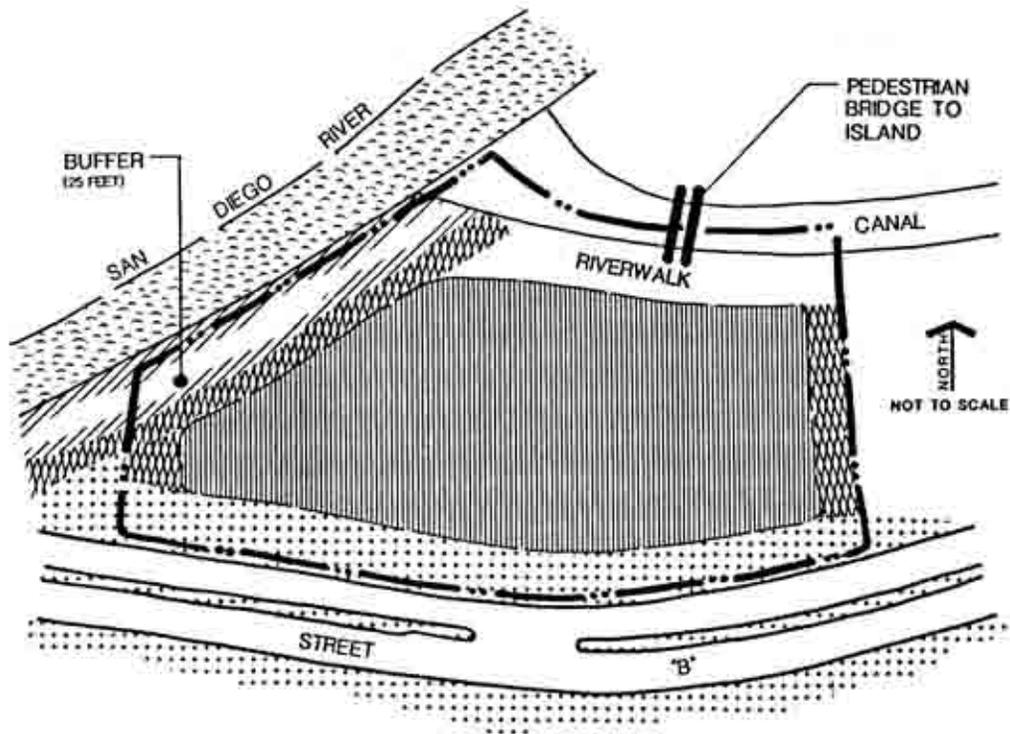
View corridors must be established along both the eastern and western borders of the parcel. The view corridor to the east should lead to a park, sculpture, or other visual focus on the island. The view corridor on the west will lead toward the river.

HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

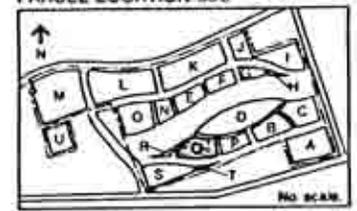
PARCEL Q
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- [Vertical Hatching] DEVELOPMENT AREA
- [Horizontal Hatching] NOISE BUFFER
- [Cross-hatch] FRIARS ROAD THEME TREE
- [Dotted] EVERGREEN
- [Small Dotted] FLOWERING TREE
- [Vertical Lines] ORNAMENTAL ENTRANCE PLANTING
- [Grid] TALL PALM TREE
- [Wavy Lines] RIPARIAN VEGETATION
- [Diagonal Hatching] SCREEN/SETBACK PLANTING
- [Diagonal Hatching] BUFFER AREA PLANTING
- [Arrow] SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

LEVI - CUSHMAN
SPECIFIC PLAN

PARCEL Q
LANDSCAPE
SCHEMATIC

USE CONSIDERATIONS

Parcel R is part of Development Area 3.

PARCEL SIZE: 1 ACRE
 USE EMPHASIS: PARK/OPEN AREA
 ADT ALLOCATION FOR DA 3: 31,669

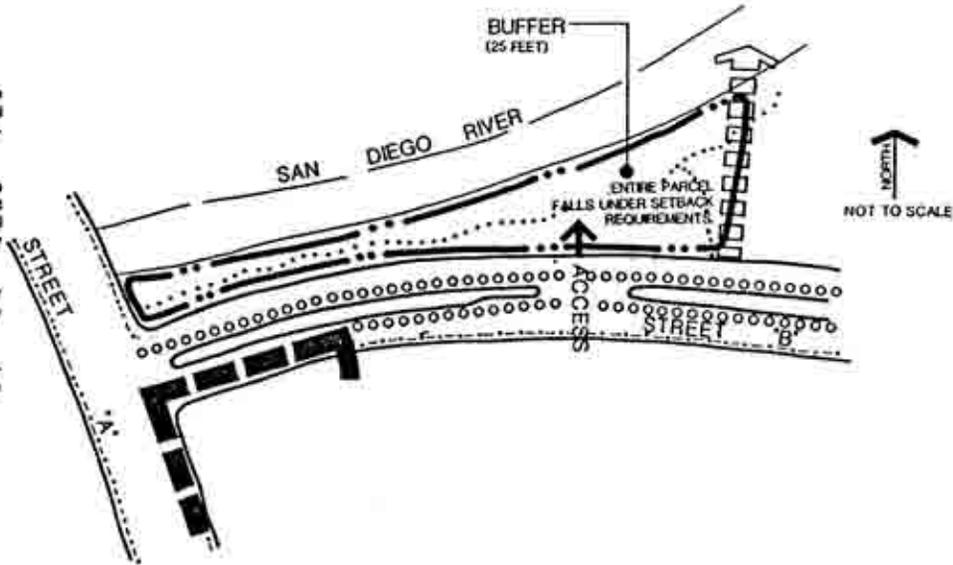
SPECIAL ELEMENTS

A location adjacent to the San Diego River at the western entrance of the project provides visual prominence to Parcel R. The theme entry on the adjacent Parcel S further emphasizes that prominence.

Development on Parcel R must include a buffer along the river channel and, since this site is a special treatment area where riparian vegetation will merge with ornamental plantings, use of a meandering bike/ped path is especially suitable.

While a view corridor is shown on the eastern border of the parcel, the entire site actually functions as a view corridor terminating at the river channel.

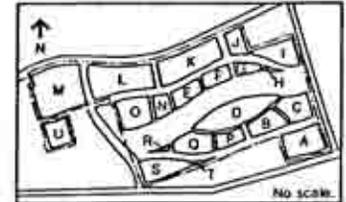
Coordination with Parcel Q is necessary to assure continuity regarding the buffer and pedestrian and bike paths.



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- ○ ○ ○ BUS ROUTES
- ++ LRT ROUTE
- BICYCLE PATH
- - - - BICYCLE LANE
- BICYCLE ROUTE

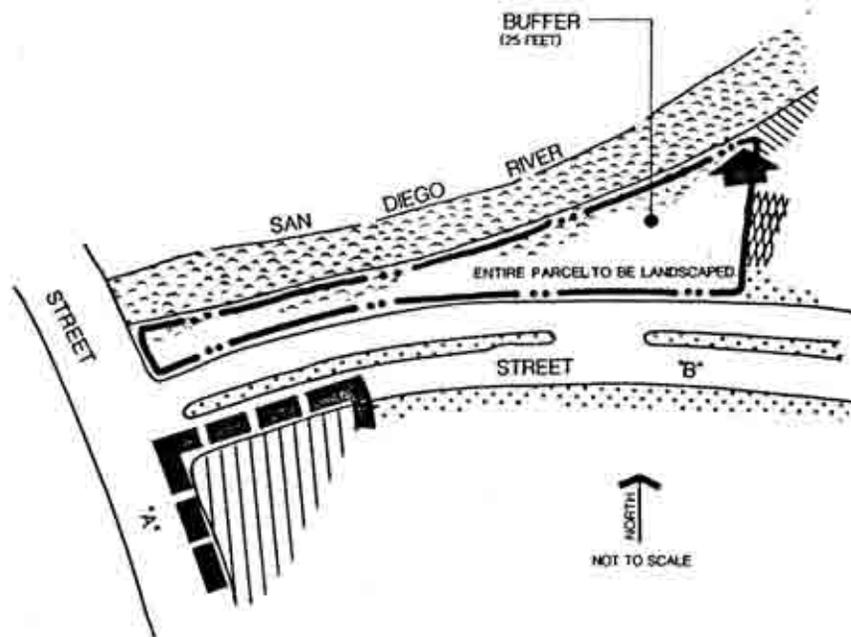
PARCEL LOCATION MAP



LEVI - CUSHMAN
 SPECIFIC PLAN

PARCEL R
 SUMMARY MAP

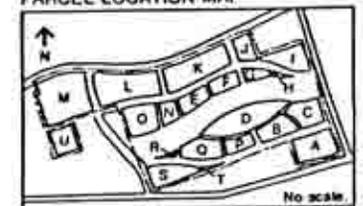
**LEVI - CUSHMAN
SPECIFIC PLAN**



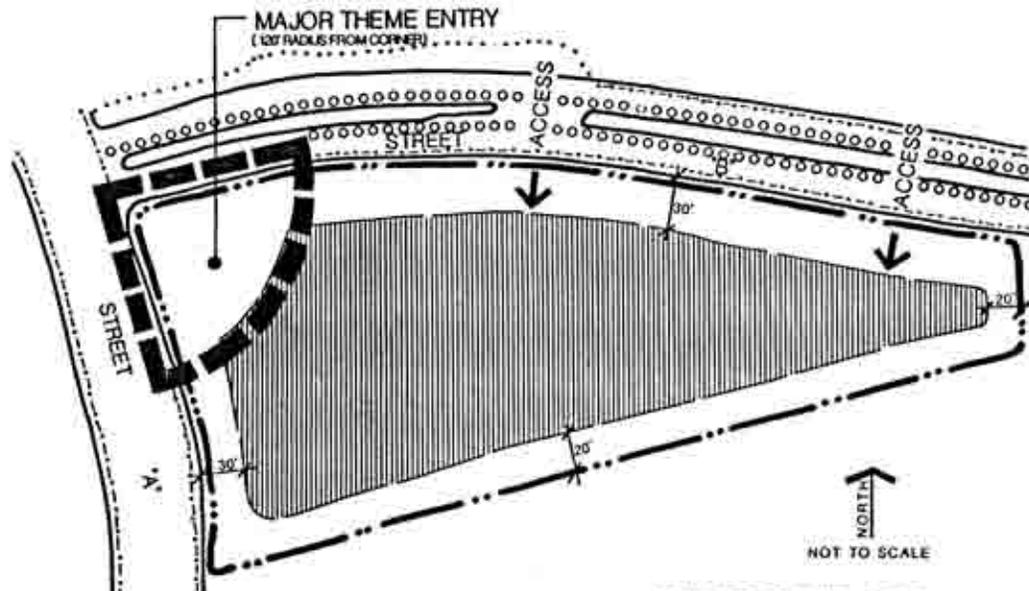
LEGEND

- PARCEL BOUNDARY
- [Vertical lines] DEVELOPMENT AREA
- [Horizontal lines] NOISE BUFFER
- [Dotted pattern] FRIARS ROAD THEME TREE
- [Stippled pattern] EVERGREEN
- [Cross-hatch pattern] FLOWERING TREE
- [Vertical lines with dots] ORNAMENTAL ENTRANCE PLANTING
- [Grid pattern] TALL PALM TREE
- [Wavy lines] RIPARIAN VEGETATION
- [Diagonal lines] SCREEN/SETBACK PLANTING
- [Diagonal lines with dots] BUFFER AREA PLANTING
- [Arrow] SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



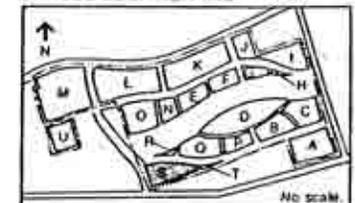
**PARCEL R
LANDSCAPE
SCHEMATIC**



LEGEND

- PARCEL BOUNDARY
- ▨ DEVELOPMENT AREA
- ↑ VIEW CORRIDOR
- ↑ ACCESS POINTS
- * RECOMMENDED BUS STOPS
- BUS ROUTES
- +— LRT ROUTE
- BICYCLE PATH
- BICYCLE LAWE
- BICYCLE ROUTE

PARCEL LOCATION MAP



USE CONSIDERATIONS

Parcel S represents approximately 9 percent of Development Area 3.

PARCEL SIZE: 7 ACRES
 HEIGHT MAXIMUM: 250 FEET
 USE EMPHASIS: OFFICE
 MAXIMUM COVERAGE: 40 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Development of Parcel S will be contingent on adoption of a final design for the I-8/Street A interchange and the parcel will not develop until that design is adopted.

A location adjacent to the freeway interchange and a 250' height maximum give development on Parcel S high visibility and special prominence. Development on this site influences the perception of the entire project and must therefore clearly express LCSP themes.

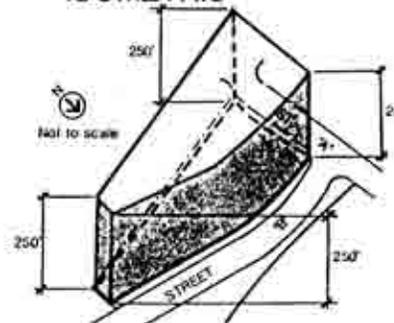
Since Parcel A is located on the outside edge of the central LCSP area, connections with the rest of the project must be emphasized, especially via pedestrian, bikeway, streetscape, and open space linkages and architectural continuity.

Design of development of Parcel S must provide a gradual height transition from the open area of Parcel R.

Sloping height requirements do not apply to Parcel S since the area required by the I-8 interchange has not been determined and a reasonable development envelope must be preserved.

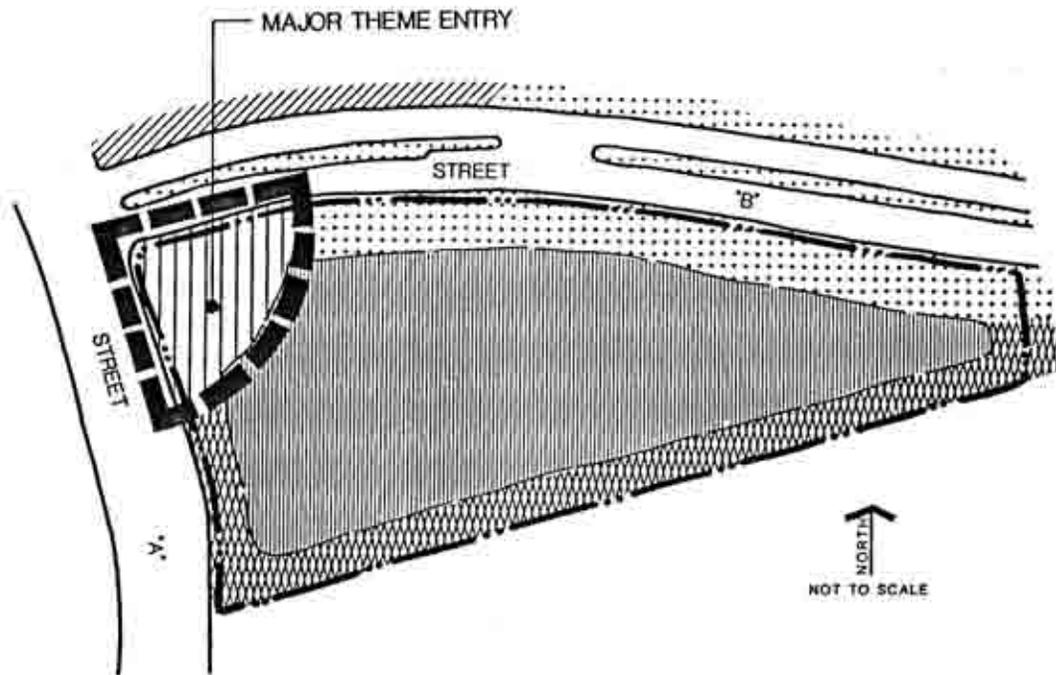
Attention must be given to the project "edges," especially to assure that a suitable transition is made to adjacent off-site areas.

HEIGHT ENVELOPE ISOMETRIC



**LEVI - CUSHMAN
 SPECIFIC PLAN**

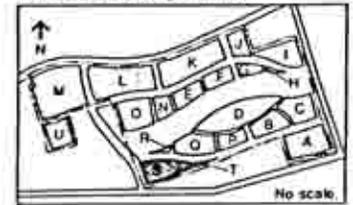
**PARCEL S
 SUMMARY MAP**



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 60 PERCENT

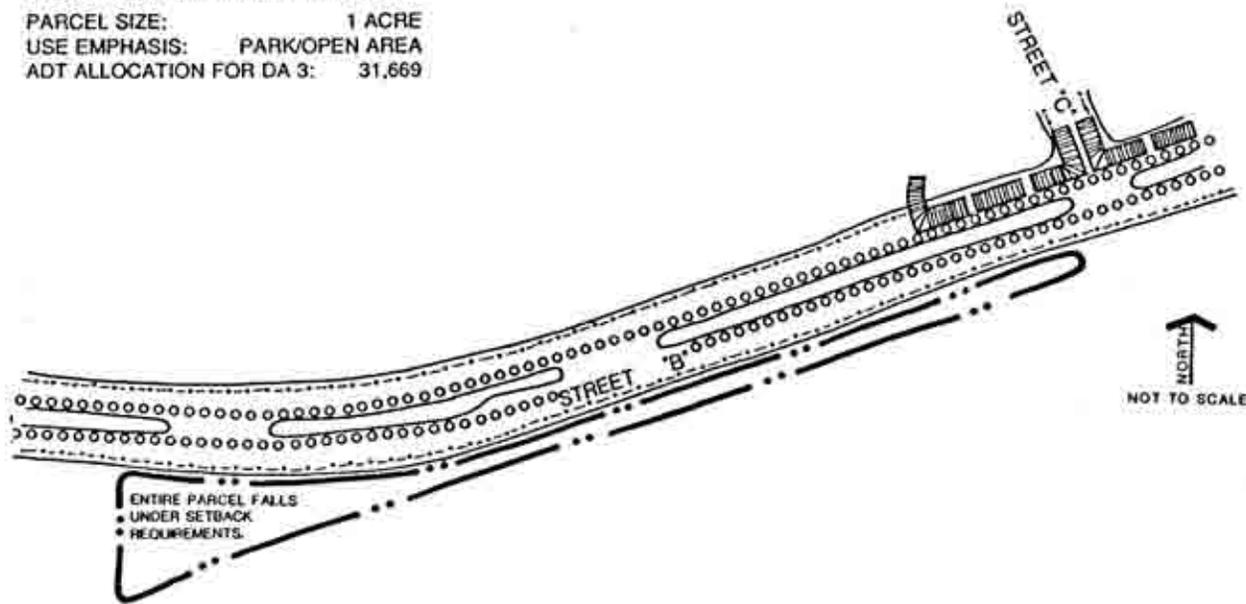
LEVI - CUSHMAN
SPECIFIC PLAN

PARCEL S
LANDSCAPE
SCHEMATIC

USE CONSIDERATIONS

Parcel T is part of Development Area 3.

PARCEL SIZE: 1 ACRE
 USE EMPHASIS: PARK/OPEN AREA
 ADT ALLOCATION FOR DA 3: 31,669



SPECIAL ELEMENTS

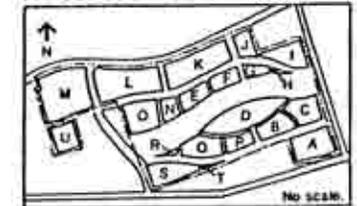
Functioning primarily as a landscape screen, Parcel T will separate the LCSP area from offsite uses and provide eastwest continuity of the streetscape treatment and pedestrian/bikeway linkages.

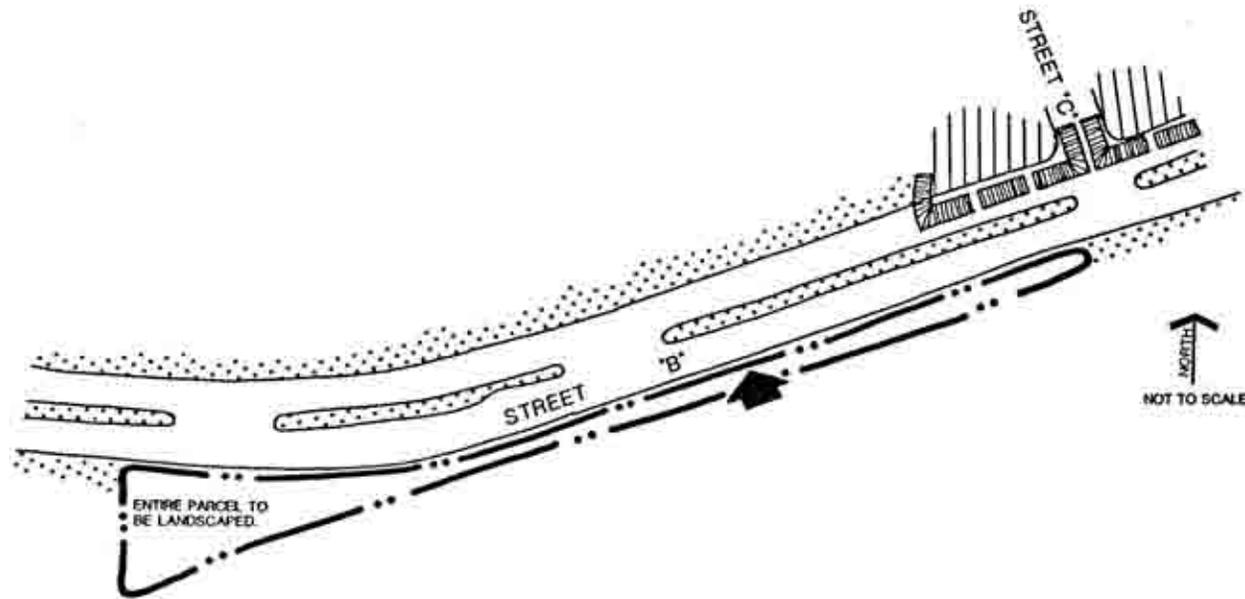
Coordination is necessary between landscape treatment on this parcel with that of the theme entry on Parcel Q.

LEGEND

- PARCEL BOUNDARY
- [Hatched Box] DEVELOPMENT AREA
- [House Symbol] VIEW CORRIDOR
- [Up Arrow] ACCESS POINTS
- [Asterisk] RECOMMENDED BUS STOPS
- [Line with Circles] BUS ROUTES
- [Line with Cross-Ticks] LRT ROUTE
- [Dotted Line] BICYCLE PATH
- [Dashed Line] BICYCLE LANE
- [Solid Line] BICYCLE ROUTE

PARCEL LOCATION MAP

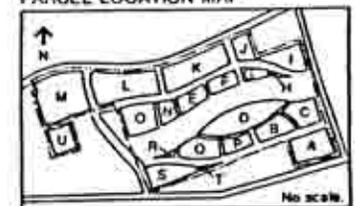




LEGEND

- PARCEL BOUNDARY
- [Vertical lines] DEVELOPMENT AREA
- [Horizontal lines] NOISE BUFFER
- [Cross-hatch] FRIARS ROAD THEME TREE
- [Dotted] EVERGREEN
- [Wavy] FLOWERING TREE
- [Vertical lines with dots] ORNAMENTAL ENTRANCE PLANTING
- [Grid] TALL PALM TREE
- [Wavy with dots] RIPARIAN VEGETATION
- [Diagonal lines] SCREEN/SETBACK PLANTING
- [Diagonal lines with dots] BUFFER AREA PLANTING
- ↑ SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL T
LANDSCAPE
SCHEMATIC**

USE CONSIDERATIONS

Parcel U represents approximately 7 percent of Development Area 3.

PARCEL SIZE: 5 ACRES
 HEIGHT MAXIMUM: 42-140 FEET
 USE EMPHASIS: NOT DETERMINED
 MAXIMUM COVERAGE: 50 PERCENT
 ADT ALLOCATION FOR DA 3: 31,669

SPECIAL ELEMENTS

Land is held in reserve on Parcel U in order to coordinate its ultimate use and development with surrounding land which lies outside the LCSP project area.

Buffer development will not be initiated until plans for the surrounding area are adopted and the river channel is constructed.

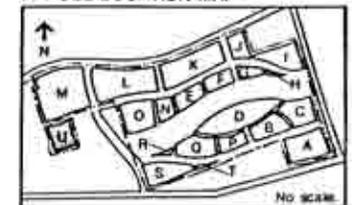
MAJOR THEME ENTRY
 (120' RADIUS FROM CORNER)



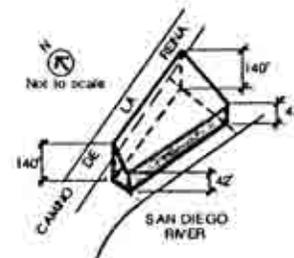
LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- VIEW CORRIDOR
- ACCESS POINTS
- RECOMMENDED BUS STOPS
- BUS ROUTES
- LRT ROUTE
- BICYCLE PATH
- BICYCLE LANE
- BICYCLE ROUTE

PARCEL LOCATION MAP

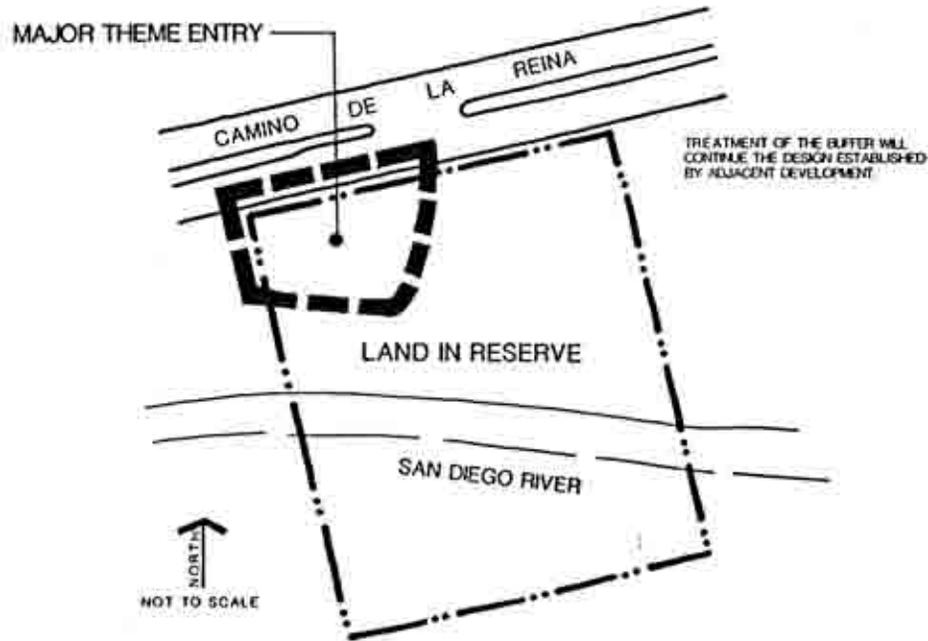


HEIGHT ENVELOPE ISOMETRIC



LEVI - CUSHMAN
 SPECIFIC PLAN

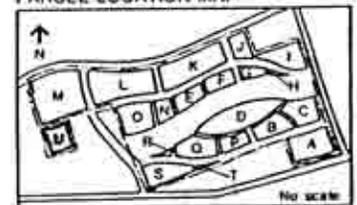
PARCEL U
 SUMMARY MAP



LEGEND

- PARCEL BOUNDARY
- DEVELOPMENT AREA
- NOISE BUFFER
- FRIARS ROAD THEME TREE
- EVERGREEN
- FLOWERING TREE
- ORNAMENTAL ENTRANCE PLANTING
- TALL PALM TREE
- RIPARIAN VEGETATION
- SCREEN/SETBACK PLANTING
- BUFFER AREA PLANTING
- SCREEN BREAK FOR VIEWS

PARCEL LOCATION MAP



MINIMUM LANDSCAPING: 50 PERCENT

**LEVI - CUSHMAN
SPECIFIC PLAN**

**PARCEL U
LANDSCAPE
SCHEMATIC**

IV. RIPARIAN REVEGETATION PROGRAM

Appendix C of the Levi-Cushman Specific Plan Environmental Impact Report

**RIPARIAN REVEGETATION PROGRAM
FOR THE LEVI-CUSHMAN SPECIFIC PLAN**

Prepared for

**CHEVRON LAND & DEVELOPMENT COMPANY
1660 HOTEL CIRCLE NORTH, SUITE 620
SAN DIEGO, CALIFORNIA 92108**

Prepared by

RECON

Regional Environmental Consultants
1276 Morena Boulevard, San Diego, CA 92110-3815 275-3732

**RECON NUMBER R-1312A
JANUARY 28, 1987**

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Attachment 1: Rick Engineering HEC-2 run

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I. INTRODUCTION

A. PURPOSE

1. The San Diego River Wetlands Management Plan

The San Diego River Wetlands Management Plan was developed by the City of San Diego in cooperation with the resource agencies. The plan is intended to provide flood-control facilities along the increasingly urbanized corridor of the San Diego River through Mission Valley, while at the same time preserving and reestablishing a measure of the natural biological quality that once existed in this area.

This project, the Riparian Revegetation Program for the Levi-Cushman Specific Plan area (Figures 1 and 2), incorporates the principal goals of the San Diego River Wetlands Management Plan. The primary policy orientation of the city's plan is

. . . to define a means of maintaining and improving the overall quality of the wetlands associated with the San Diego River while allowing for development in Mission Valley. The intent of the plan is to establish a framework for accomplishing this goal by incorporating biological considerations into planning for development and flood management on the river (p. G-3).

The stated objectives of the Wetlands Management Plan are to establish a guide for natural and revegetated wetlands preservation and improvement in the valley, to clarify common goals for agencies and the private sector to allow incorporation of biological requirements within the scope of new development, and, therefore, to facilitate compliance with the processing requirements of state and federal agencies for projects which affect wetlands.

Reestablishment and management of wetlands within the existing floodway (FW) of the San Diego River is mandated by the Wetlands Management Plan:

The established FW zone boundary encompasses a sensitive resource area wherein no modifications shall be permitted unless mitigation is accomplished in agreement with the [San Diego River Wetland Management] plan (p. G-15).

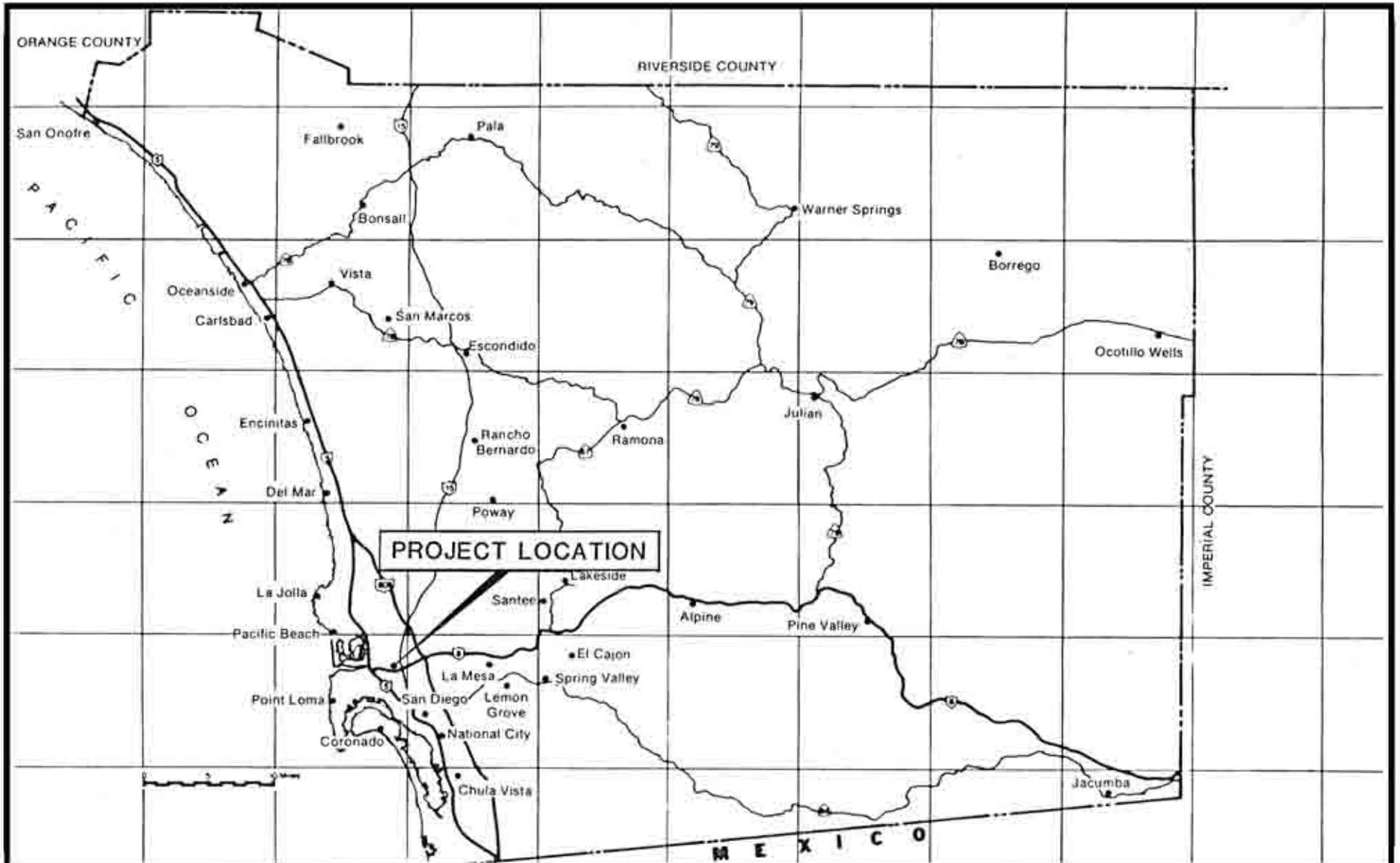


FIGURE 1. THE LOCATION OF THE PROPOSED PROJECT RELATIVE TO THE COUNTY OF SAN DIEGO.

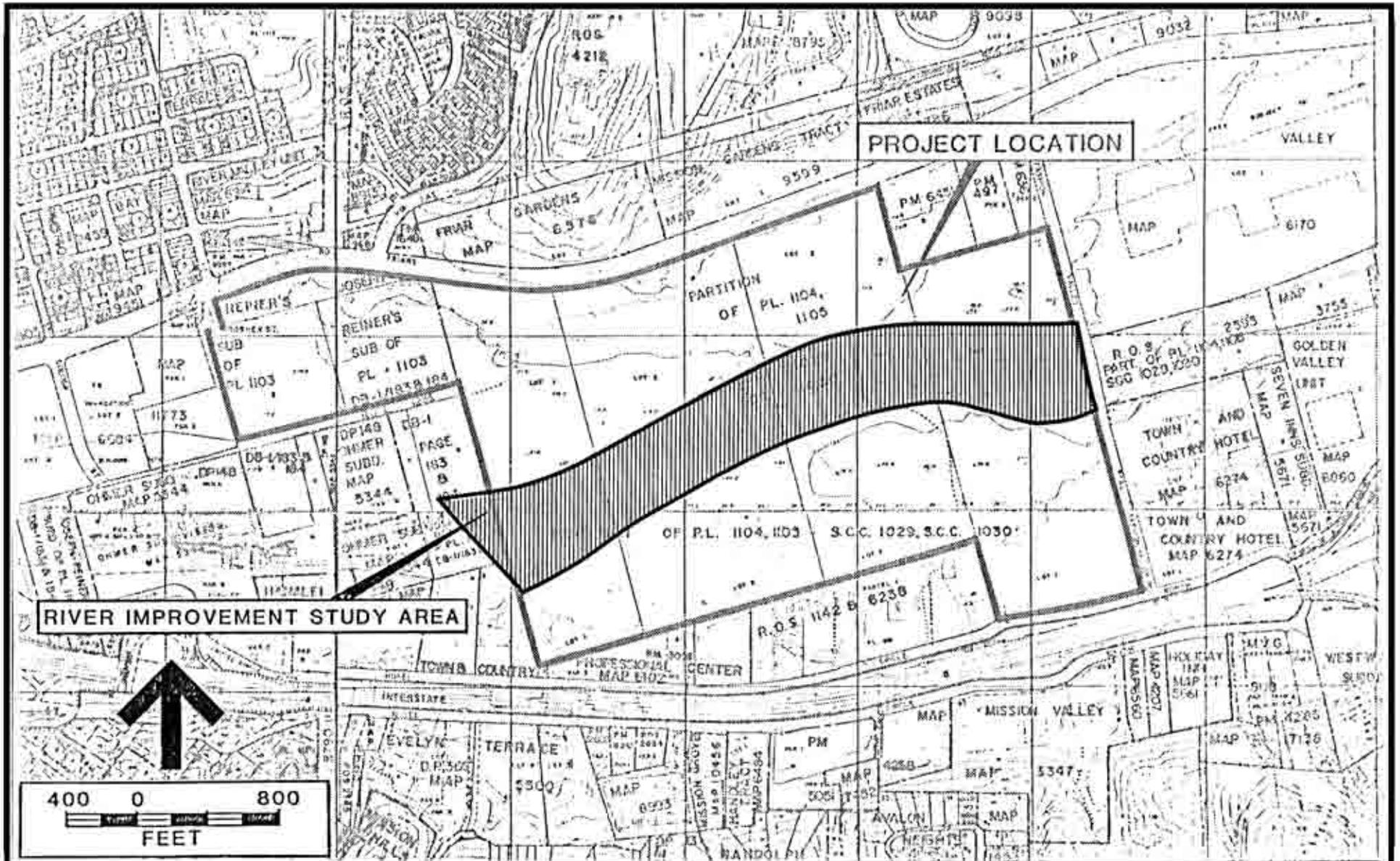


FIGURE 2. LOCATION OF THE RIPARIAN REVEGETATION STUDY AREA

The purpose of wetlands revegetation is defined and qualified as to intent and limitations:

The primary purpose of the [plan] is to protect, preserve and enhance wetlands it is recognized that the floodway is within an urban setting and must serve multiple uses, [not] solely serve as wildlife habitat (p. G-13).

Specific habitat reestablishment guidelines in the Wetlands Management Plan call for creation of a distribution of habitat types within the wetlands corridor of 35 to 45 percent riparian woodlands, 25 to 35 percent freshwater marsh, and 20 to 40 percent open water. Islands should also extend along 5 to 15 percent of the length of any river segment.

The Wetlands Management Plan also discusses specifically the segment of the river that includes the Levi-Cushman Specific Plan area (p. G-27). Some land that is presently within the floodway could be recovered for development if a flood-control channel capable of containing a 100-year flood and supporting a viable wetlands corridor is developed. Wetlands restoration must be incorporated into channel design. The revegetated channel could be considered compensation for loss of the small areas of existing riparian woodland and degraded wetlands (golf course), and the creation of a biologically valuable corridor would eliminate the need for compensating loss of floodway on an acre-for-acre basis.

2. The Levi-Cushman Riparian Revegetation Program

The primary purpose of the Riparian Revegetation Program for the Levi-Cushman property is threefold. First, implementation of the project will reduce the flood risk to both existing and proposed development, through channelizing the floodway of the San Diego River between Fashion Valley Road and the proposed crossing of Via las Cumbres. Second, the creation of a corridor of riparian habitat approximately 400 feet wide along the existing channel of the San Diego River through the property will mitigate the decrease in the width of the floodway resulting from project implementation and create new wildlife habitat. Third, the newly created habitat area will also serve to mitigate the loss of the visual open space currently provided by the green area of the golf courses.

The flood-control channel is designed to convey peak flood flows of 49,000 cfs (cubic feet per second), the peak flow during a 100-year flood event as estimated by the Army Corps of Engineers (COE), without raising the calculated surface of the existing 100-year flood level.

In accordance with the appropriate federal, state, and local policies, the proposed Riparian Revegetation Program includes provision for the establishment of a continuous riparian habitat corridor through the Levi-Cushman property. The riparian habitat has been designed to include riparian woodland, freshwater marsh, and open water habitats within the proposed flood-control channel, as delineated in the Wetlands Management Plan.

Although the reestablished riparian habitat will provide critical wild-life habitat in the valley, it will also be an important visual resource to the community, replacing the green open space of the golf course. Several provisions have been incorporated into the program design to enhance the value of the new floodway habitat as an aesthetic resource without significantly decreasing its biological value.

The specific goals of the Riparian Revegetation Program for the restructured floodway on the Levi-Cushman property are:

- a. Design and revegetation of both sides of the channel to provide 36.2 acres of continuous wetlands habitat on both sides of the river distributed as follows: 19.5 acres of open water habitat (+53.8 percent), 3.7 acres of freshwater marsh (+10.1 percent), and 13.1 acres of riparian vegetation (+36.1 percent). Riparian is subdivided into 8.1 acres of willow-dominated riparian habitat cover (+21.8 percent) and 4.9 acres of cottonwood/sycamore-dominated riparian (+13.3 percent).
- b. Maintenance of biological resources in accordance with the goals of the revegetation program, including development of riparian woodland, freshwater marsh, and open water habitats in the reconstructed floodway.
- c. Maintenance of the hydraulic characteristics of the channel to ensure adequate flood control (conveyance of 100-year flows of 49,000 cfs).

- d. Maintenance and management of the aesthetic and passive recreational resource represented by the revegetated river channel.
- e. Monitoring of the establishment and subsequent development of vegetation and habitat quality to serve as a basis for maintenance activities.

This document will also detail phasing of channel construction, the structure and function of buffers along the revegetated floodway, uses permitted in the buffers adjacent to wetlands, and land uses allowed in developed parcels adjacent to the channel in accordance with the Wetlands Management Plan and with the requirements for maintaining the biological and aesthetic quality of important habitat areas.

One off-site improvement to be implemented by the project, the extension of Street "A" would affect 2.8 acres of riparian habitat. Included in the program described below are measures recommended to mitigate this off-site wetlands habitat loss in accordance with the guidelines of the Wetlands Management Plan. The location and area of project and off-site impacts and mitigation measures are shown in Figure 3.

3. State and Federal Agency Concerns

Applicants for projects along the San Diego River must obtain a U.S. Army Corps of Engineers Section 404 permit. The concerns of the COE are mandated by the Clean Water Act of 1972 and the River and Harbors Act of 1899 to minimize the loss of wetlands and degradation of water quality. This has been broadly interpreted to include all actions that result in the filling or dredging of wetlands. Section 404(b)(1) of the Clean Water Act proscribes development which will have an unacceptable adverse effect on wildlife and other values. The COE, in consultation with the U.S. Fish and Wildlife Service (USFWS), and following appropriate guidelines, must make a determination that a project (including mitigation measures) subject to a 404 permit will have no adverse impacts and that there is no feasible alternative to the proposed action. Furthermore, any impacts that result from project implementation must provide appropriate mitigation, as outlined in the USFWS Mitigation Policy (Appendix C of the Wetlands Management Plan). Other applicable federal authority is summarized in Appendix B of the Wetlands Management Plan.

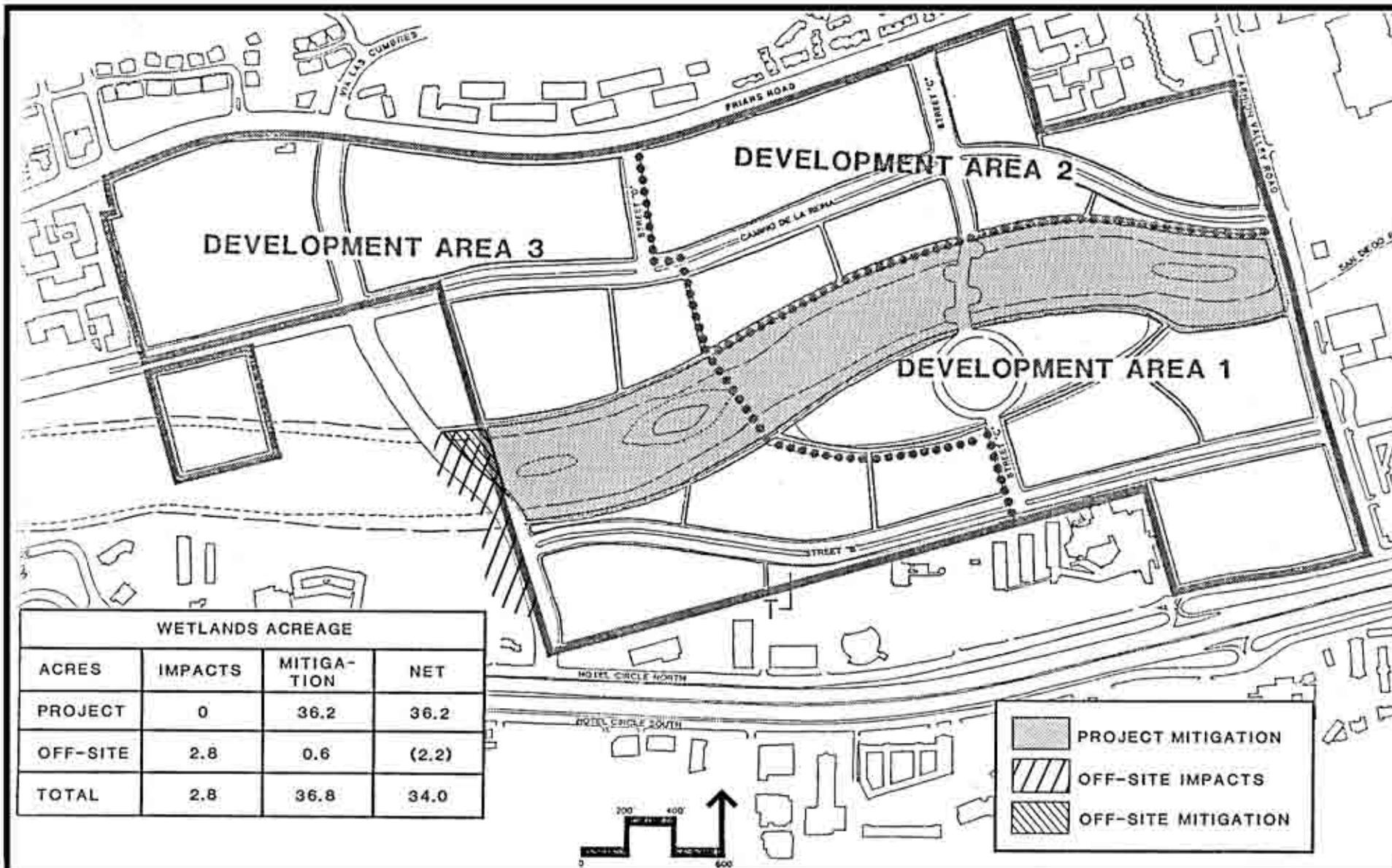


FIGURE 3. IMPACTS AND MITIGATIONS ASSOCIATED WITH THE PROPOSED PROJECT

Applicants must also process a California Department of Fish and Game (DFG) Section 1601/1603 Agreement for any alteration of the streambed of the San Diego River and meet the standards of the Regional Water Quality Control Board.

B. EXISTING HABITATS ON THE SAN DIEGO RIVER

As described in the Biological Resources Survey of the Levi-Cushman Properties, the project area supports wetlands habitat (primarily emergent aquatic vegetation) within the banks of the existing pilot channel of the San Diego River. The remainder of the property is currently the golf course and driving range of the Stardust Country Club.

Included in the existing landscaping of the golf course are a number of mature trees (approximately 500). Transplantable individuals of native riparian species will be used in the revegetation of the river channel. Nonnative trees that are transplantable will be incorporated into the landscaping of the specific plan area.

Approximately 4.43 acres of disturbed riparian woodland exists on the border between the Stardust Country Club Golf Course (Levi-Cushman property) and the River West Golf Course to the west. The valley to the west to the Morena Boulevard crossing is a mix of habitat types, predominantly transitional wetlands, shrub-dominated uplands, riparian woodlands, and disturbed open areas. From the Morena Boulevard crossing to the railroad crossing and Interstate 5 (I-5), the habitat is primarily shrub-dominated uplands and riparian woodland with areas of transition and emergent wetlands. To the west of I-5, the flood-control channel contains primarily wetlands which make a transition to salt water and tidal influence increases.

To the east of the specific plan between State Route 163 (SR 163) and Fashion Valley Road, the normal river flow volume is contained by a narrow, disturbed, soft-bottomed channel. The channel varies from approximately 300 feet across at SR 163 to 100 feet at Fashion Valley Road. The channel is disturbed but contains areas of riparian woodland and emergent wetlands on the eastern end. The majority of the channel is disturbed wetlands or open disturbed land. Immediately to the north of this segment of the channel is the parking lot of Fashion Valley Center, which is within the 100-year floodway. To the south of the channel are various office buildings, hotels, and their associated parking lots.

II. DESIGN CRITERIA

A. THE WETLANDS RESTORATION PLAN

1. Riparian Vegetation Ecology

Riparian vegetation along southern California coastal plain rivers such as the San Diego River is characterized by an overstory of trees such as willow, sycamore, cottonwood, and live oak. Understory species include shade-tolerant shrubs, herbs, and woody vines, ranging from chaparral shrubs such as holly-leaved cherry to riparian woodland taxa such as wild grape and California wild rose. The riparian vegetation community structure is determined by three principal factors: (a) vertical distance of the soil surface above the average dry-season groundwater elevation; (b) maximum flood-stage water velocity; and (c) random disturbance factors such as variations in weather patterns or channel erosion patterns. For any point on a transect across the river, the natural vegetation structure consists of plant populations adapted to associated drought-stress and flood-energy conditions. Random disturbance factors superimpose a patchwork pattern consisting of discrete areas in various stages of development following disturbance.

Prior to agricultural and urban development of much of Mission Valley, the natural vegetation consisted of three generalized zones: a channel area consisting of scoured sand and scattered pools formed by current irregularities, vegetated with sedges, bulrushes, and cattails; a zone of willows and cottonwoods increasing in age and size with distance from the channel; and further from the channel, a floodplain riparian woodland grading from mature black willows and cottonwoods to sycamores and live oaks on the edges of the valley floor. On the south-facing northern valley wall, native coastal sage scrub and perennial grasslands intergraded into the riparian forest. On the south wall, chaparral and live oaks formed the transition.

Current vegetation patterns along the river reflect both historical land use changes and disturbance/response abilities intrinsic to the vegetation. Along much of the present-day river, only the willow zone is present immediately adjacent to the channel. The channel itself has been straightened, deepened, and narrowed for flood control in many areas, and many bordering areas have been elevated above the natural floodplain. The prevalent willow zone vegetation is adapted to frequent

disturbance from scouring by high-energy floodwaters by its rapid growth and invasive abilities, explaining its presence in the absence of deliberate revegetation efforts.

2. Wetlands Restoration Goals

As described above, current vegetation on the project area is primarily turf grasses associated with the golf course, with no existing native riparian habitat. The primary goal of the wetlands restoration portion of the Riparian Revegetation Program is to reestablish native riparian habitat within the flood-control channel proposed for the project area. To the maximum extent possible within constraints imposed by the physical characteristics of the proposed flood-control channel, the goal of the restoration plan is to provide a level of habitat diversity and continuity within the restored area comparable to that of undisturbed systems.

The wetlands restoration plan will also implement mitigation for disturbance of riparian vegetation caused by the construction of one off-site road required as a condition of the project. Riparian vegetation will be planted along currently disturbed floodway areas in compensation for the paved floodplain areas created by the off-site roadways.

The wetlands restoration effort will result in the establishment of 3.67 acres of emergent aquatic vegetation, 8.11 acres of willow fringe thicket/woodland, and 4.94 acres of mixed riparian forest along the on-site portion of the river channel (see Figures 6 and 7). Approximately 0.6 acre within the floodway to the west of the project site will be restored to riparian vegetation in connection with the construction of Street "A."

The intention of the Riparian Revegetation Program is the creation of wetlands habitat through the reach of the San Diego River that crosses the specific plan area. This wetlands will be a natural lake during the dry season providing habitat for a variety of water-dependent wildlife species and a free-flowing river during the wet portion of the year. The shallow water of the dry season lake (depths of five to six feet) should be deep enough to inhibit filling in with vegetation yet shallow enough to allow adequate mixing to prevent degraded water quality.

3. Revegetation Habitat Categories

As shown on Figures 4 and 5, the riparian revegetation area has been divided into five generalized habitat types according to distance from and elevation above the river channel. The final design may require slight alterations to adjust for the grading design. These include open water, emergent aquatic, willow fringe, mixed riparian forest, and buffer plants. Each of these habitats is composed of one or more plant associations.

The open water category has been indicated for those areas of the channel which will be excavated to a depth exceeding 2 feet below the minimum ground-water elevation. The water level will be maintained (except during storm runoff conditions) at approximately 11 feet above mean sea level (MSL) along the entire on-site length of the river by a weir structure at the western boundary of the site.

Elevations for planting were determined by measuring elevations of established habitat along the San Diego River. Emergent aquatic vegetation is indicated for areas between 9 and 13 feet above MSL, these areas being characterized by shallow water and saturated soils with periodic high-energy flood velocities. Between about 13 and 21 feet MSL (up to 10 feet above the dry-season water level), willow fringe vegetation has been indicated. This vegetation is composed primarily of relatively small willow species adapted to annual flooding and rapid regeneration following disturbance by floodwaters. Channel areas higher than 21 feet above MSL will be established as a mixed riparian forest zone, to be planted with a variety of larger riparian tree species and native understory species.

A buffer area at least 25 feet in width will be implemented along the outer edge of the riparian restoration area. This area will be vegetated with native riparian tree species, with a 5-foot dense planting barrier of understory species such as blackberry and wild rose to discourage encroachment into the adjacent riparian habitat (see below).

Within each generalized habitat type, plantings will be implemented in plant associations of varying quantity and arrangement of the component species. These associations are intended to mimic the kinds of random aggregations of habitat stands which result from the natural development of riparian vegetation over time in unchanneled systems, and at the same time provide an interface to the project's aesthetic design by providing views to open water.

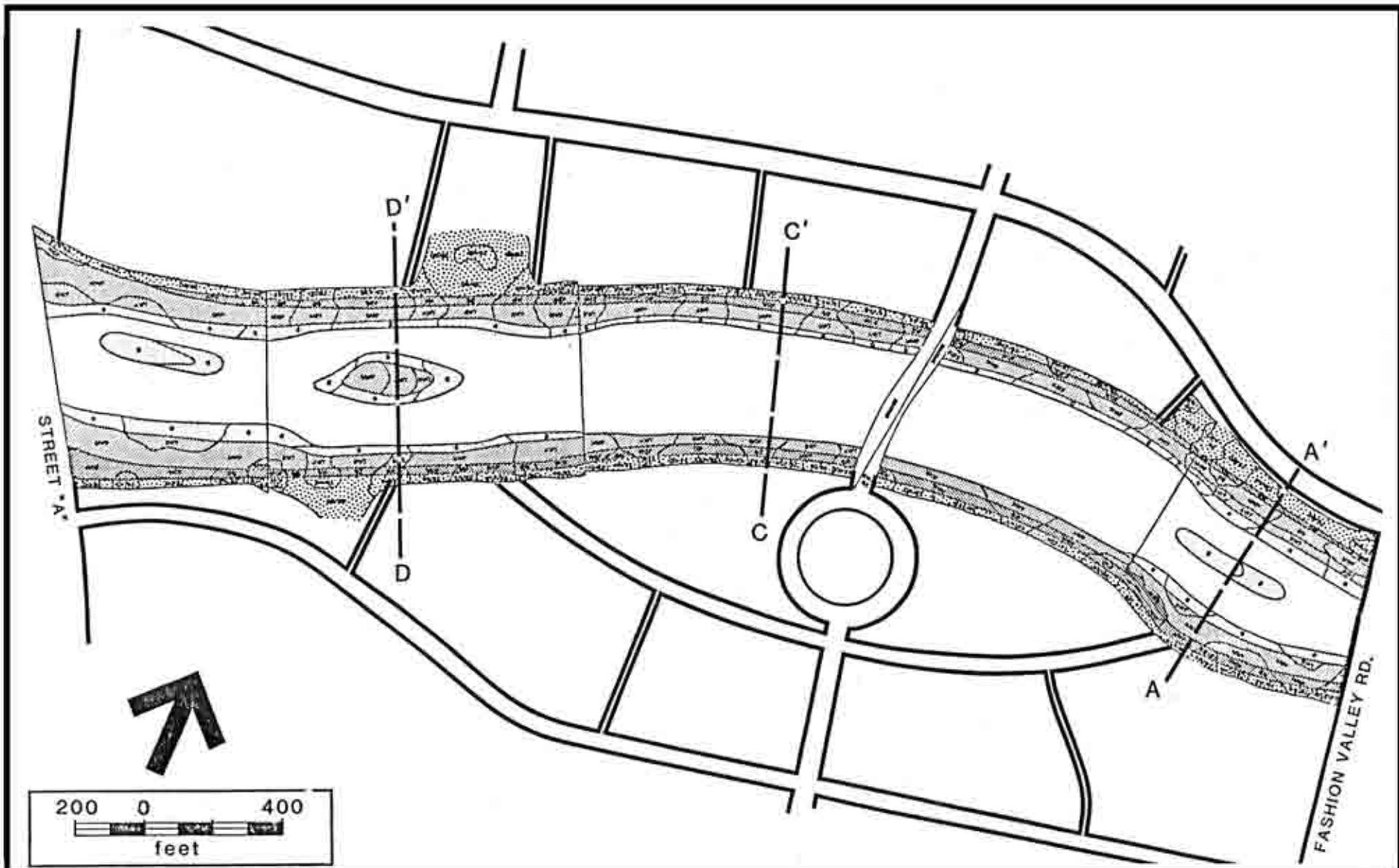


FIGURE 4. REVEGETATION PLAN FOR THE LEVI-CUSHMAN SPECIFIC PLAN RIPARIAN REVEGETATION PLAN

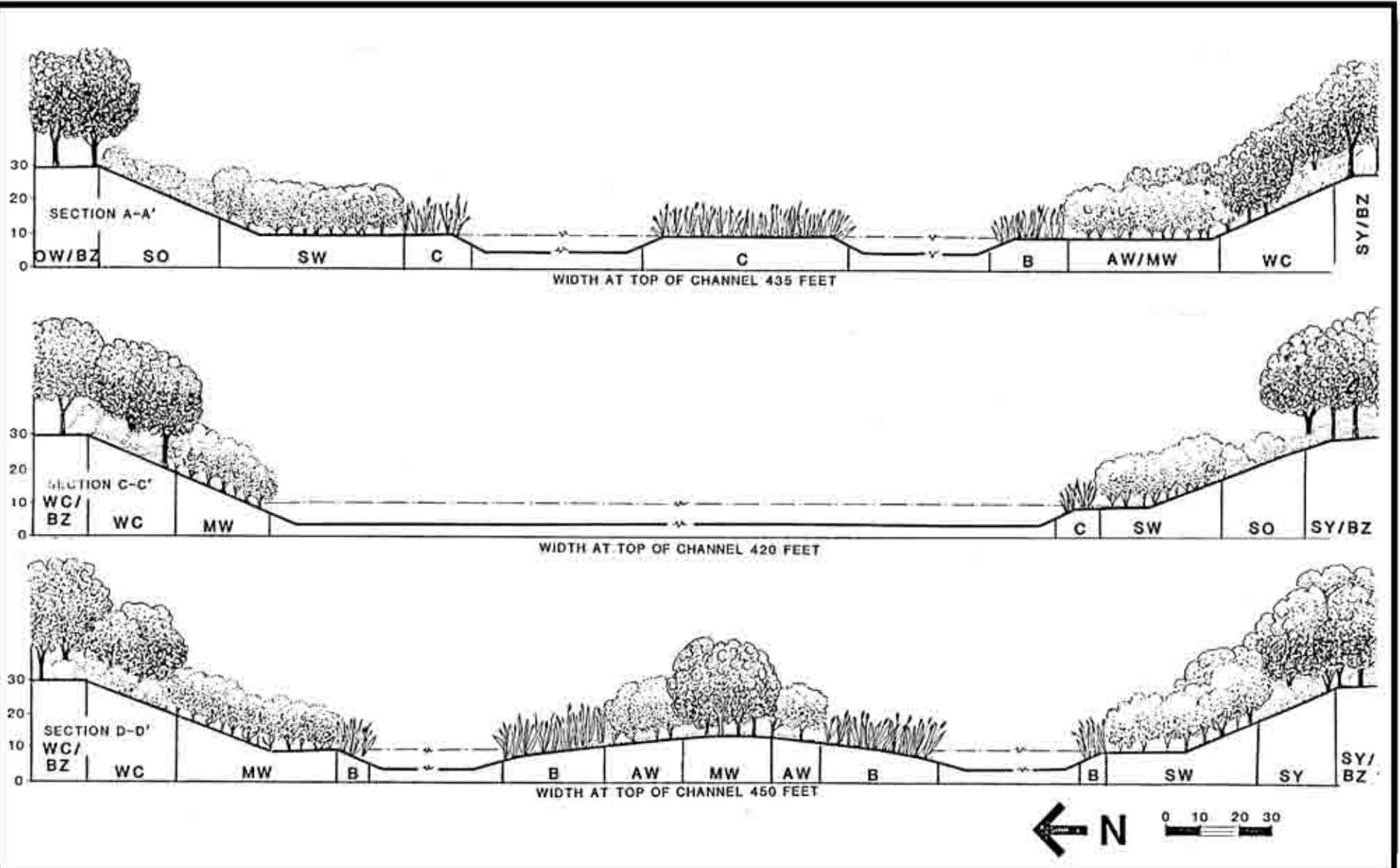


FIGURE 5. TOPOGRAPHIC CROSS SECTIONS SHOWING REVEGETATION

While natural riparian vegetation normally grows on virtually level substrate, much of the woodland to be implemented with the revegetation plan will be on the 2.5:1 channel containment slopes. This difference will create a need for an initial irrigation and maintenance program period to assure reasonable survival of the planted materials.

4. Plant Association Descriptions

Table 1 lists the plant species to be used for each plant association within the generalized categories. Also shown is how these vegetation units correspond to environmental gradients of groundwater availability and flood energy. Each plant association is given a map symbol (see key) which may be used to interpret the revegetation designs illustrated in Figures 5, 6, and 7. Table 2 lists species composition and planting densities for each plant association.

As described in Tables 1 and 2, the emergent aquatic zone will consist of two plant associations, Cattail (C) and Bulrush (B). Both of these associations will depend primarily upon natural successional processes to establish the emergent aquatic vegetation initiated by planting rhizomes of locally obtained Typha (cattail) and Scirpus (bulrush) species. Because these plants spread rapidly by vegetative reproduction when established on appropriate habitat, planting will be at low densities sufficient to establish species diversity.

Three plant associations are included in the willow fringe zone. Sandbar Willow Woodland (SW) will consist primarily of low-growing (to 15 feet) shrubby species. Arroyo Willow Woodland (AW) and Mixed Willow Woodland (MW) are progressively taller, ranging to 40 feet at maturity. These plant associations will be planted at densities specified in Table 2.

The four plant associations specified for the mixed riparian woodland zone include Willow-Cottonwood Woodland (WC), Sycamore Woodland (SY), Oak Woodland (OW), Mixed Willow Woodland (MW), and Shrub Openings (SO). These patches will be taller at maturity (to 80 feet), with gaps and openings of low shrubby growth providing structure diversity and visual access to the river. Three plantings will be aggregated into groves at an overall density of 150 trees per acre (average spacing of 17 feet) according to the definitions given in Table 2.

TABLE 1
WETLAND RESTORATION PLAN:
VEGETATION CATEGORIES, STAND TYPES, AND ENVIRONMENTAL GRADIENTS

Environmental Gradients		Generalized Vegetation Category	Plant Association Species Composition			Plant Association Name	Map Symbol	
Soil Water	Disturbance/ Flow Energy		Tree Species	Understory/Shrub Layer	Seed Mix/ Ground Cover			
Saturated Mesic	High	Emergent Aquatic	---	<u>Scirpus californica</u> <u>Scirpus acutus</u>	---	Bulrush	B	
			---	<u>Typha angustifolia</u> <u>Typha latifolia</u>	---	Cattail	C	
	Low	Willow Fringe	---	<u>Salix hindsiana</u> <u>Baccharis glutinosa</u>	Lowland Mix	Sandbar Willow Woodland	SW	
			<u>Salix lasiolepis</u>	<u>Salix hindsiana</u> <u>Baccharis glutinosa</u>	Lowland Mix	Arroyo Willow Woodland	AW	
			<u>Salix gooddingii</u> <u>Salix lasiandra</u> <u>Salix laevigata</u>	---	Lowland Mix	Mixed Willow Woodland	MW	
		Occasional Inundation	Mixed Riparian Woodland	---	<u>Baccharis glutinosa</u> <u>Cercocarpus minutiflorus</u> <u>Prunus ilicifolia</u> <u>Iva hayesiana</u> <u>Sambucus mexicanum</u> <u>Heteromeles arbutifolia</u> <u>Hymenoclea monogyra</u>	Lowland or Upland	Shrub Opening	SO
				<u>Populus fremontii</u> <u>Salix gooddingii</u> <u>Alnus rhombifolia</u>	<u>Rubus ursinus</u> <u>Rosa californica</u>	Upland	Willow/Cottonwood Woodland	WC
				<u>Platanus racemosa</u> <u>Alnus rhombifolia</u>	<u>Sambucus mexicanum</u> <u>Prunus ilicifolia</u> <u>Vitis girdiana</u> <u>Rosa californica</u>	Upland	Sycamore Woodland	SY
				<u>Quercus agrifolia</u>	<u>Prunus ilicifolia</u> <u>Rosa californica</u> <u>Rubus ursinus</u> <u>Vitis girdiana</u> <u>Rhus integrifolia</u>	Upland	Oak Woodland	OW
				Seasonally Dry	No Inundation	Buffer	Use tree cover from patch type indicated	<u>Cercocarpus minutiflorus</u> <u>Heteromeles arbutifolia</u> <u>Prunus ilicifolia</u> <u>Rhus integrifolia</u> <u>Rubus ursinus</u>

**TABLE 2
STAND-TYPE DEFINITIONS**

Species	Quantity	Planting Layout
<u>Bulrush (B)</u>		
<u>Scirpus californica</u> <u>Scirpus acutus</u>	100 rhizomes per acre of either or both species	Scattered planting near shoreline in late spring following last rains (no irrigation).
<u>Cattail (C)</u>		
<u>Typha angustifolia</u> <u>Typha latifolia</u> <u>Typha domingensis</u>	100 rhizomes per acre total; mixed species	Scattered planting near shoreline in late spring following last rains (no irrigation).
<u>Sandbar Willow Woodland (SW)</u>		
<u>Salix hindsiana</u>	300 plants/acre	Concentrate in 4,000-sq.ft. subunits within patch (6 per acre with 50 plants each).
<u>Baccharis glutinosa</u>	150 plants/acre	Distribute evenly over remainder of patch.
Lowland seed mix	---	Hydroseed entire patch (spray irrigate).

TABLE 2
STAND-TYPE DEFINITIONS
(continued)

Species	Quantity	Planting Layout
<u>Arroyo Willow Woodland (AW)</u>		
<u>Salix lasiolepis</u>	200 plants/acre	Distribute evenly at 15-foot intervals over entire patch.
<u>Salix hindsiana</u>	100 plants/acre	Plant adjacent to (C) or (B) patches. Concentrate in 1,000-sq.ft. subunits. Use 4 subunits per acre with 25 plants each.
<u>Baccharis glutinosa</u>	100 plants/acre	Distribute evenly at 21-foot intervals over entire patch.
Lowland seed mix	---	Hydroseed entire patch (spray irrigate).
<u>Mixed Willow Woodland (MW)</u>		
<u>Salix gooddingii</u>	100 plants/acre	Plant random mix of 3 species at ±15-foot intervals over entire patch (spray irrigate).
<u>Salix lasiandra</u>	50 plants/acre	
<u>Salix laevigata</u>	50 plants/acre	
Lowland seed mix	---	Hydroseed entire patch.

TABLE 2
STAND-TYPE DEFINITIONS
(continued)

Species	Quantity	Planting Layout
<u>Shrub Openings (SO)</u>		
<u>Iva hayesiana</u>	100 plants/acre	Plant in 25-50-plant patches, with 2-5-foot intervals between plants (spray irrigate).
<u>Baccharis glutinosa</u>	50 plants/acre	These six shrub species are listed in general order of increasing drought-tolerance. Plant at approx. 12-foot intervals over the (SO) patch, with the most drought-tolerant species in higher areas (spray irrigate or drip irrigate).
<u>Hymenoclea monogyra</u>	50 plants/acre	
<u>Sambucus mexicana</u>	50 plants/acre	
<u>Prunus ilicifolia</u>	50 plants/acre	
<u>Heteromeles arbutifolia</u>	50 plants/acre	
<u>Cercocarpus minutiflorus</u>	50 plants/acre	
Upland or lowland seed mix	---	Hydroseed entire patch. Use upland mix on higher slope areas.
<u>Willow/Cottonwood Woodland (WC)</u>		
<u>Populus fremontii</u>	100 plants/acre; 20% 5-gal. size	Plant in 10-15-tree groves with 10-foot intervals (drip irrigate).
<u>Salix gooddingii</u>	75 plants/acre	Plant spaced over remainder of patch (drip irrigate).
<u>Alnus rhombifolia</u>	25 plants/acre	Plant in 5-tree groves with 10-foot spacing (drip irrigate).

TABLE 2
STAND-TYPE DEFINITIONS
(continued)

Species	Quantity	Planting Layout
<u>Rubus ursinus</u> <u>Rosa californica</u>	100 plants/acre 50 plants/acre	Mixed at 17-foot spacing (no irrigation).
Upland seed mix	---	Hydroseed entire patch.
<u>Sycamore Woodland (SW)</u>		
<u>Platanus racemosa</u>	100 plants/acre; 20% 5-gal. size	Plant in 5-tree groups with 10-foot spacing (drip irrigate).
<u>Alnus rhombifolia</u>	50 plants/acre; 20% 5-gal. size	Plant in 5-tree groups with 10-foot spacing (drip irrigate).
<u>Sambucus mexicana</u> <u>Vitis girdiana</u> <u>Prunus ilicifolia</u> <u>Rosa californica</u>	50 plants/acre 50 plants/acre 50 plants/acre 50 plants/acre	Distribute over entire patch with <u>Vitus</u> and <u>Rosa</u> in the tree groups and the others outside (drip irrigate).
Upland seed mix	---	Hydroseed entire patch.
<u>Oak Woodland (OW)</u>		
<u>Quercus agrifolia</u>	100 plants/acre; 20% 5-gal. size	Plant evenly at 21-foot intervals.
<u>Platanus racemosa</u>	50 plants/acre; 20% 5-gal. size	Plant in 5-tree groups with 10-foot spacing (drip irrigate).

TABLE 2
STAND-TYPE DEFINITIONS
(continued)

Species	Quantity	Planting Layout
<u>Prunus ilicifolia</u>	50 plants/acre	Distribute over entire patch at 15-foot intervals, with <u>Rosa</u> , <u>Vitus</u> , and <u>Rubus</u> nearest to the trees (drip irrigate).
<u>Vitis girdiana</u>	25 plants/acre	
<u>Rosa californica</u>	50 plants/acre	
<u>Rubus ursinus</u>	50 plants/acre	
<u>Rhus integrifolia</u>	25 plants/acre	
Upland seed mix	---	Hydroseed entire patch.
<u>Buffer Zone (BZ)</u>		
Trees	Use species and density from indicated patch-type	Plant according to layout given for indicated patch-type.
<u>Cercocarpus minutiflorus</u>	50 plants/acre	Distribute evenly at about 15-foot intervals.
<u>Heteromeles arbutifolia</u>	50 plants/acre	
<u>Prunus ilicifolia</u>	50 plants/acre	
<u>Rhus integrifolia</u>	50 plants/acre	
<u>Rosa californica</u>	100 plants/acre	Plant in tree groups at about 10-foot intervals.
<u>Rubus ursinus</u>	100 plants/acre	
Upland seed mix	---	Hydroseed entire buffer zone.

5. Buffers

To create and maintain a viable wildlife corridor within the floodway, habitat areas must be protected from excessive human disturbance--the same factors that also degrade aesthetic values on the river corridor. For these reasons, buffers will restrict activities within and adjacent to the floodway. Buffers will consist of a vegetated habitat area of variable width within the 100-year floodplain and adjacent native species oriented landscaping that extends the habitat area and provides opportunities for passive recreation. The width of the proposed buffer (see Figures 4 and 5) is a minimum of 25 feet, including a 5-foot planting barrier. Project passive open space is incorporated in the design to effectively increase the vegetated scope of the buffer.

The buffer design forms a restricted area adjacent to the floodway 25 feet in width in which limited uses are permitted. A 5-foot barrier planting of thorny shrubs (e.g., wild rose and blackberry), signs, berms, low walls, and fencing will discourage entry into the buffer. Some passive uses will be permitted within the buffer. These activities will include hiking trails, bicycle trails, and picnic tables in specified locations.

6. Design Interface of Biological and Aesthetic Goals

In accordance with the San Diego River Wetlands Management Plan, no uses will be permitted within the floodway of the river across the property. Entry into the habitats will be inhibited by a combination of appropriate plantings in the habitat buffer area, signage, view opportunities, and focusing of activities through placement of trails and passive use areas. One of the major features of the Levi-Cushman Specific Plan is the creation of an artificial waterway--the Riverwalk--to the south of the developed "island." This feature will direct human activity away from the habitat areas, while satisfying the planning goal of using the river as the thematic and aesthetic focus of the project. Also incorporated into the specific plan are three public open space areas adjacent to the river and a narrow pedestrian-oriented bridge across the river that are designed to focus attention toward the river without allowing direct access to the riparian habitat in the floodway.

To meet the aesthetic goals of the Riparian Revegetation Program, planting adjacent to the river will be carried out in a manner which preserves important

view corridors. Shading in Figures 6 and 7 illustrate the location of view corridors into the river area which will be created and maintained by design and selective pruning. Much effort has been expended to create a river environment which will be unique in scope and character in Mission Valley. Therefore, the revegetated habitat along the upper slopes of certain portions of the floodway and buffer have been designated for habitat types that are relatively low growing (e.g., Shrub Openings) or open groves of taller trees (e.g., Sycamore Woodland) allowing views under the canopy, in order to preserve view corridors onto open water from strategic locations within the project.

Habitat patches have been located in the revegetation plan so that maintenance activities for preserving view corridors to open water (pruning shrub and thicket growth to specified height limits) will enhance biological values through the maintenance of structural diversity.

7. Permitted Land Uses Adjacent to the Floodway Area

The Levi-Cushman Specific Plan presents general guidelines for development adjacent to the revegetated floodway which emphasize the intention that buildings be designed to maintain a comfortable scale relationship with adjacent open space area and to terrace down to the river, with building heights lower adjacent to the river corridor. In addition, the plan proposes that public recreation facilities be located adjacent to the floodway buffer and include picnic tables, benches, viewing areas, pathways, and jogging trails.

Specific development criteria for the areas adjacent to the river channel are proposed to ensure that the intent of these guidelines is met. These criteria include the following:

- a. No buildings shall be located less than 20 feet from the floodway. The majority of buildings along the river should be 50 feet or more from the floodway.
- b. Reflective glass will not be used on the facades of buildings that face the wetlands area and area adjacent to it. This will reduce the incidence of bird mortality that reflective glass can cause (the glass can disorient flying birds and result in collisions with structures).

- c. Buildings located adjacent to the river corridor should not have direct pedestrian access to the adjacent buffer, although visual access should be encouraged.

8. Phasing

Appropriate construction phasing and revegetation under the Riparian Revegetation Program are critical to attaining the objectives of the Levi-Cushman Specific Plan. To this end, the flood-control channel will be developed in two phases (Figure 8). In addition to conforming with overall development phasing, channel construction phasing will allow for refining the revegetation strategy for the entire channel area based on success of the initial revegetation phase. The project biologist will be an independent consultant charged with the responsibility for implementing a monitoring program to assure satisfactory completion of various tasks and phases and to provide data to the technical management committee. Construction and revegetation of the first phase of the channel will be incorporated into the first development phase. Implementation of channel construction and revegetation through the remainder of the project area will be triggered by any development to the west of the first-phase channel.

B. PLANT MATERIALS AND INSTALLATION SPECIFICATIONS

1. Implementation

Implementation of the revegetation plan will require close coordination of the project engineer, landscape architect, grading contractor, landscape contractor, and plant material contractor. The basic mechanism for implementation of the revegetation plan will be via the landscape plans for the overall project. Landscape drawings must be prepared by a licensed landscape architect which implement the guidelines and specifications of this document. The contracting nursery will require at least one year's lead time prior to initiation of the project for proper preparation of plant materials.

2. Plant Materials

Table 3 lists all plant species specified by the revegetation plan, showing container sizes, material sources, and seed mixes. The Salix hindsiana, S. lasiolepis, S. laevigata var. araquipa, and S. lasiandra (sandbar, arroyo, red,

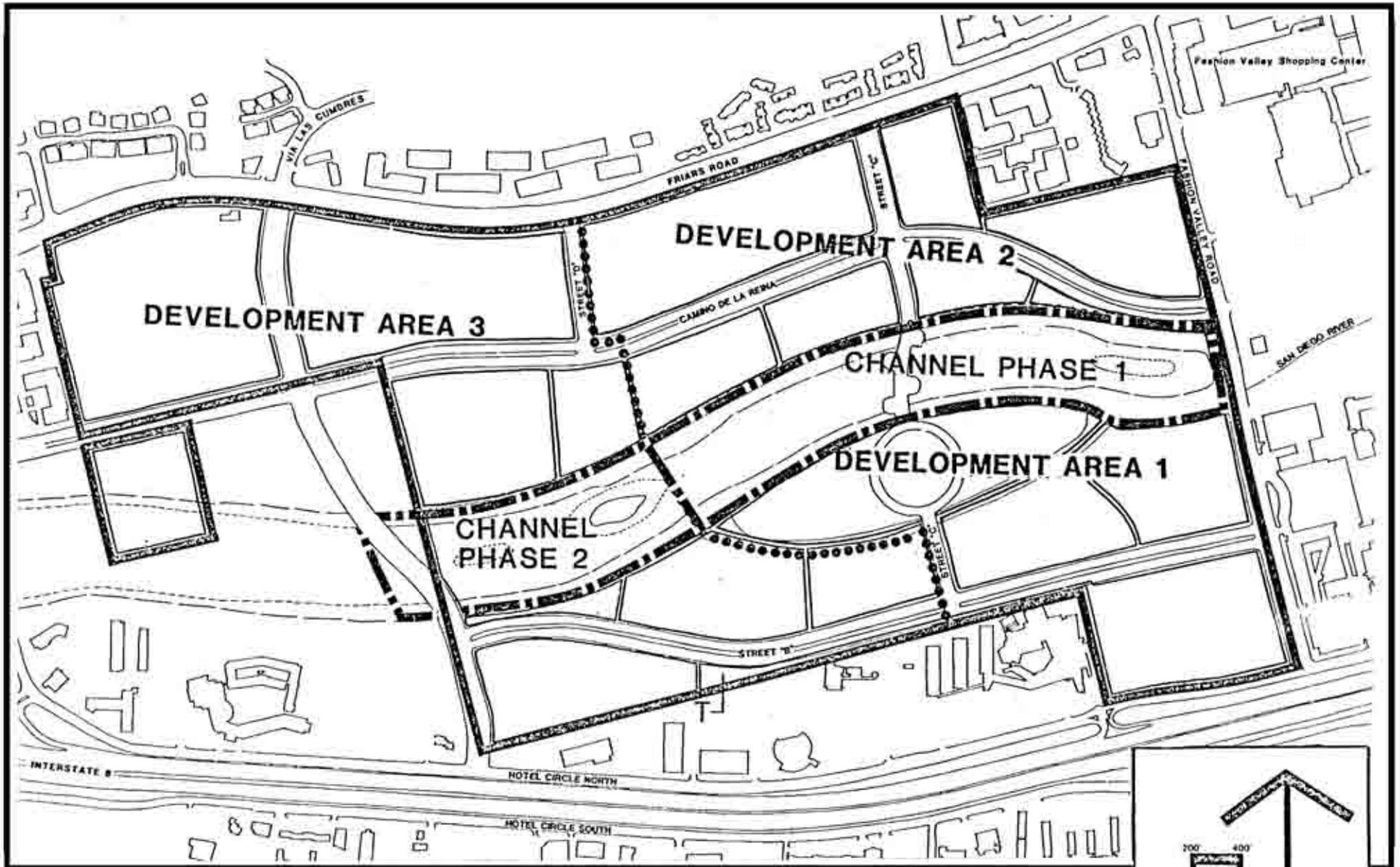


FIGURE 8. PROPOSED CHANNEL CONSTRUCTION AND REVEGETATION PHASE ON THE LEVI-CUSHMAN SPECIFIC PLAN

**TABLE 3
PLANT MATERIAL LIST**

Category	Container Size	Source
<u>Trees</u>		
<u>Alnus rhombifolia</u> white alder	1g, 5g	2
<u>Platanus racemosa</u> western sycamore	1g, 5g	2
<u>Populus fremontii</u> Fremont cottonwood	1g, 5g	1,2
<u>Quercus agrifolia</u> coast live oak	1g, 5g	2
<u>Salix gooddingii</u> var. <u>variabilis</u> black willow	1g	1
<u>Salix laevigata</u> var. <u>araquipa</u> red willow	1g	1
<u>Salix lasiandra</u> lance-leaf pacific willow	1g	1
<u>Salix lasiolepis</u> arroyo willow	1g	1
<u>Shrubs</u>		
<u>Baccharis glutinosa</u> mule fat	1g	1
<u>Cercocarpus minutiflorus</u> mountain mahogany	1g	2
<u>Heteromeles arbutifolia</u> toyon	1g	2
<u>Hymenoclea monogyra</u> burrow bush	1g	1
<u>Iva hayesiana</u> San Diego poverty weed	1g	2
<u>Prunus ilicifolia</u> holly-leaved cherry	1g	2
<u>Rhus integrifolia</u> lemonade berry	1g	2
<u>Rosa californica</u> California wild rose	1g	2
<u>Rubus ursinus</u> California blackberry	1g	2
<u>Sambucus mexicana</u> Mexican elderberry	1g	2
<u>Vitis girdiana</u> wild grape	1g	2
<u>Emergent Aquatics</u>		
<u>Scirpus acutus</u> hard-stem bulrush	T	3
<u>Scirpus californicus</u> California bulrush	T	3
<u>Typha angustifolia</u> narrow-leaved cattail	T	3
<u>Typha latifolia</u> cattail	T	3

TABLE 3
PLANT MATERIAL LIST
(continued)

KEY:	1g one-gallon size	SOURCE:	1: contract grown from local cuttings
	5g five-gallon size		2: contract grown from nursery stock or seed
	T transplant		3: locally collected rootstock

LOWLAND SEED MIX

Artemisia douglasiana western mugwort
Cotula coronopifolia brass buttons
Mimulus cardinalis scarlet monkeyflower
Oenothera hookeri tall yellow evening primrose
Salix hindsiana sandbar willow
Scirpus sp. bulrush
Typha sp. cattail
Zaucheneria californica California fuchsia

UPLAND SEED MIX

Artemisia californica California sagebrush
Artemisia palmeri Palmer's sagebrush
Clematis pauciflora southern California clematis
Eschscholzia californica California poppy
Keckiella cordifolia heartleaf penstemon
Lonicera subspicata southern honeysuckle
Solanum douglasii nightshade
Zaucheneria californica California fuchsia

and yellow willows) and the Baccharis glutinosa (mulefat) should be planted as rooted cuttings. These willows can be planted unrooted if done during the winter after leaves have fallen and the buds have begun to swell. The Salix gooddingii (black willow) should be planted from one-gallon pots and be initially larger than the other willow species. Container plants will be primarily contract-grown from local stock, but several species such as Quercus agrifolia (coast live oak), Alnus rhombifolia (white alder), and some native shrubs may be available "off the shelf."

To increase the size diversity of the upper area woodlands, a variety of sizes of trees (one-gallon, five-gallon, and transplanted mature trees) will be used. Currently, native cottonwoods and sycamores are growing on the on-site golf course. Many of these could be transplanted into the revegetation site or possibly used in place with other species planted around them. This would depend on the final contouring and design.

Willow cuttings should be at least 18 inches long and at least 0.25 inch in diameter. Larger-diameter cuttings increase survival rates. Cuttings should be cut flat across the top end to reduce water loss and diagonally at the bottom to increase water uptake. The cuttings should be inserted at least five inches into the rooting medium. Rooting hormone may or may not be used. Rooted cuttings should be inspected by the project biologist prior to installation. Other specifications as required would be available from the project biologist.

Plant materials should be as listed unless changes are approved by the project biologist. The project biologist should also approve the condition of all the plants prior to installation, especially the rooted cuttings.

Contract supervision for the supply of plant materials for the project will be the responsibility of the project landscape architect. Tree of Life Nursery in San Juan Capistrano is currently the only nursery (known to the authors of this report) with sufficient experience and ability with local native riparian species to assure successful delivery of the proper materials for a project of this magnitude.

3. Site Preparation

Grading plans for the project will specify a low degree of soil compaction for the channel slopes to allow proper root growth of planted trees and avoid a requirement for augering planting holes. Pre-planting soils testing should be

conducted by the project landscape architect to assess requirements for planting specifications. High-quality topsoil present on the site will be stockpiled prior to grading and used for landscape and riparian revegetation plantings.

Following initial grading and construction of the channel and just prior to planting and seeding, the site should be treated to reduce the chances of invasion by weeds. The channel slopes should be spray irrigated for a period of two weeks to initiate weed seed germination, then treated with Roundup (a herbicide) to kill the young weeds. If time permits, a second sequence of watering and Roundup application would assure even greater weed suppression. Planting of revegetation species should be done two weeks later, after the Roundup has broken down. This procedure should be done only during non-flooding seasons.

4. Rock Erosion Protection

Rock erosion protection will be used at the leading edge of islands, on the downstream side of bridge abutment, and below weir-drop structure where necessary for hydraulics. The rock erosion protection along the sides of the channel will be vegetated using a method based on live staking described by Gray and Leiser in Biotechnical Slope Protection (1982). Rooted cuttings will be planted prior to applying the rock erosion protection. On the higher areas, species of the Mixed Willow Woodland (MW) will be used, and on the lower areas, species of the Arroyo Willow Woodland (AW). Planting before rock is applied assures the roots will be in the soil below the rock. This also avoids the need to remove small areas of rock in which to plant. As rock is applied, plants may be bent or slightly damaged, but the species used (Salix and Baccharis) are resilient and will readily resprout shoots and roots.

Topsoil should be applied over the rock erosion protection if done at a time of year so that plants can become established, especially root systems, before winter rains and floods. Plantings on the rock erosion protection should be irrigated by the method used on adjacent plantings. Seeds can be applied to the topsoil on the rock erosion protection as on other areas.

Plastic erosion-control netting will be used in some locations on the channel slopes where water velocities approach seven feet per second. Vegetation can be planted through the netting; the combination of roots and enmeshed netting buried below the soil surface will enhance both soil and vegetation erosion resistance.

5. Timing of Plant and Seed Installation

Hydroseed application and container stock installation on the channel slopes should be installed during the period between October 1 and December 30. Hydroseed application and container planting in the channel bed and on lower slopes affected by flooding during the rainy season should be deferred until April 1 and accomplished prior to May 15 to minimize the probability of flood damage prior to establishment. Temporary spray irrigation may be required on the channel slopes to initiate and maintain growth of the hydroseed application if significant drought conditions occur in the period following application.

6. Irrigation Requirements

A temporary irrigation system for the revegetation area will be required. A drip irrigation system is required on the higher areas of the revegetation area in order to prevent the weed problem which would result from year-round spray irrigation. The higher areas with drip irrigation will be Willow-Cottonwood Woodland (WC), Sycamore Woodland (SY), Oak Woodland (OW), and Shrub Openings (SO). Spray irrigation will be required on lower areas of Sandbar Willow Woodland (SW), Arroyo Willow Woodland (AW), and Mixed Willow Woodland (MW). Spray irrigation on the higher areas may be required the first spring and summer if the winter is abnormally dry or if the seeded plants have not become well enough established to survive the summer drought. The buffer zone shrubs not designated to be irrigated would be more likely to survive if they are deep-watered (1 to 1.5 gallons per plant) one time each month during the first spring and summer.

Irrigation is expected to be required for the first one or two dry seasons on lower areas and longer on upper areas. To some extent, permanent landscape irrigation associated with adjacent project landscaping will provide water to the riparian plantings. The temporary irrigation systems will be turned off as soon as the associated plantings are capable of independent growth, in order to assure adequate growth of root systems. Prior to shutting down irrigation systems, testing will be conducted on representative subsections to determine ability to survive without irrigation.

C. FLOOD-CONTROL DESIGN

The fundamental purpose of the proposed channel is to provide flood control for the surrounding property which will be developed to commercial and residential uses. The proposed facility has been designed to meet the hydraulic requirements and design guidelines specified by the Mission Valley Community Plan in that it will contain the projected peak discharge for a 100-year (probability of 0.01 for any particular year) flood event of 49,000 cfs without raising the water surface elevation more than one foot (Figure 9). The channel design has been configured to maintain the designed hydraulic performance in a low-maintenance system where riparian vegetation is allowed to develop. Modeling studies of channel performance utilizing conservation resistance factors for vegetated islands and banks were used to create a channel design which optimized flood-control performance within the constraints imposed by revegetation requirements (Bowling, Rick Engineering, 4/3/86).

III. MANAGEMENT PLAN

A. PURPOSE

The purpose of this management plan is to ensure that the goals of the Riparian Revegetation Program are met, resulting in the creation and maintenance of riparian habitat, maintenance of adequate flood control, and maintenance of the river as an aesthetic amenity to the community. The success of the program in achieving these goals depends upon adequate monitoring of the progress and status of these aspects of the river channel and correct maintenance responses to remedy any problems which may occur. In addition, monitoring and maintenance activities must integrate these goals in a consistent manner and in accordance with the guidelines agreed upon by the developer, the City of San Diego, COE, DFG, and USFWS.

The success of the revegetation effort will be primarily a function of the survival of initial and replacement plant materials and subsequent maturation of the created habitats through natural processes. It is to be expected that natural factors will remold the initial design to some extent, but the reestablished vegetation will be similar to that which is proposed. The primary measure of success of the revegetation effort will be the survival of individual plants after initial planting, during the first rainy season, and then in competition with adventitious species that will inevitably populate the site. A secondary, but immediate, goal will be the establishment of an adequate cover to minimize the extent of erosion after the new channel has been graded. After initial establishment of the vegetation, successional processes in response to ecological conditions will influence the ultimate composition and structure of habitat in the channel.

Management decisions may have to be made if successional processes lead toward habitat structure or composition in conflict with either flood-control or aesthetic goals of the channel. As a general policy, flood control should have priority where public safety is involved. Biological productivity should be maintained to the extent possible, without jeopardizing public safety. Aesthetic quality of the wetland habitat should also be maintained while not degrading biological productivity and values. Vegetation that is lost during the first three years after establishment will be replaced.

B. TECHNICAL ASSESSMENT

The degree to which the actual implementation of the project satisfies the stated goals of the Riparian Revegetation Program will be determined by periodic inspection by the project hydraulic engineer, landscape architect, and biologist, as described in Section C below. These inspections will assess the attainment of the performance criteria listed below.

1. Hydraulic Performance

Evaluation by the project hydraulic engineer will consist of periodic inspection of the channel to determine whether topographic changes (such as sediment deposits causing a decrease in channel depth) or biotic changes (such as growth of woody vegetation in channel areas planned for soft vegetation) have occurred which require remedial action.

Corrective action will be recommended in accordance with the implementation procedures discussed below if the evaluation indicates existence of conditions which might result in a failure of the flood-control system to perform as designed.

2. Aesthetic Performance

Evaluation by the project landscape architect will consist of periodic inspection of the channel plantings to assess whether vegetation development, particularly in the buffer areas and view corridors, is consistent with the visual aesthetic goals of the Riparian Revegetation Program. The proper function of the irrigation system will be assessed, and landscape maintenance procedures will be reviewed during each periodic inspection.

Corrective action will be recommended if the evaluation indicates that maintenance activities within the buffer or channel plantings (such as pruning or weeding) are required in order to maintain view corridors or visual aesthetic standards specified by the Riparian Revegetation Program and the Specific Plan.

3. Biological Performance

Evaluation by the project biologist will consist of periodic surveys in the channel area to assess survival and development of the revegetation plantings

and to assess change in quality of wildlife habitat. Vegetation and habitat mapping will be produced during each inspection that documents mortality in tree and shrub plantings, immigration of native riparian plant species, invasion by nonnative weedy plant species, general distribution of wildlife species, and habitat quality. The level of disturbance (if any) originating from adjacent development will be assessed, and a comparison of actual versus planned physical-environmental conditions (e.g., water surface elevation, soil moisture) will be made.

The creation of high-quality wildlife habitat is one of the major goals of the revegetation program. While assessment of the success of vegetative reestablishment is the most easily quantifiable measure of the success of the project, it is only an indirect measure of wildlife use. Breeding bird surveys and wintering bird surveys will be conducted during the first five years after project implementation, in order to estimate habitat utilization as a measure of wildlife habitat quality. For comparison with later data, breeding and wintering bird surveys will also be conducted prior to project implementation and during the construction phase.

Corrective action will be recommended in accordance with the implementation procedures described below if the assessment indicates that one or more of the following conditions exist:

- a. Mortality occurs in the tree and shrub plantings of any particular segment of the revegetation area, indicating a need to assess the cause of the mortality. Make corrections and replant where necessary. All trees and shrubs which are lost during the first five years due to disease, overwatering, irrigation failure, or vandalism will be replaced. Vegetation will be replaced during the first three years of the program if lost due to flooding.
- b. Invasion by nonnative nuisance species which reduce habitat quality (such as castor bean or giant reed grass) has occurred, indicating a need for weeding and physical removal. Invasive nonnative species will be removed biannually during the five-year maintenance period.
- c. Disturbance associated with human activity in the surrounding development is occurring, indicating a need to assess buffer function and formulate recommendations to reduce disturbance.

- d. Actual physical-environmental conditions are significantly different from predicted conditions in some portion of the revegetation area, indicating a need for corrective action.
- e. Conditions related to development or maintenance activities on areas surrounding the channel are having a detrimental effect on the habitat quality, indicating a need for corrective action.

C. IMPLEMENTATION

It is anticipated that with financing through an LCSP maintenance district, the City of San Diego will be responsible for implementation of the Riparian Revegetation Program. Actual terms of the implementation arrangement will be defined in a Development Agreement negotiated between the City and the project developer.

Basic components of the Development Agreement will include the following:

1. Ownership of the improved flood-control facility will be maintained by the developer.
2. A flood-control easement to ensure conveyance of floodwaters and an open space easement will be established on the property within the floodway.
3. The developer will be responsible for maintenance of the flood conveyance capacity, the biological quality, and the aesthetic quality of the revegetated channel and buffer areas for a period of five years after the initial establishment of the vegetation.
4. The developer will contract the assistance of a management team consisting of a hydraulic engineer, a biologist, and a landscape architect to direct activities related to monitoring and maintenance of the Riparian Revegetation Program.
5. Monitoring will continue for five years after completion of the revegetation plan implementation.

The scope of work for the management team will include preparation of periodic reports addressing the performance criteria described in the previous section. The biological assessment should be semiannual for the first three years after implementation and annual for the next two years. The final biological assessment should review the results of the implementation program and describe modifications and remedial actions implemented during the monitoring period, to make these data available for use in the design of other such projects. The hydraulic and landscape reports are to be prepared annually over the five-year monitoring period. All three final reports will contain management recommendations to the City of San Diego concerning long-term resource and engineering management of the facility.

These reports, and periodic field visits by representatives of the City of San Diego, DFG, and USFWS, will allow adequate assessment of the project success. Reports will be sent to DFG and USFWS for review and comment. The city may require remedial action within the scope of the Development Agreement between the city and the developer.

Routine maintenance activities on the project site that could affect the biological structure or function of the revegetated wetlands in the flood-control channel must be made so that they balance the three principal goals of the Riparian Revegetation Program. To ensure this, all such activities (other than emergency measures) should be reviewed by a competent ecologist or conservation biologist who is familiar with the restoration program, prior to initiation. The biologist should determine that the proposed actions are either (1) minor in nature (minor in their effects or in the area affected) and require no further review before implementation or (2) of large enough significance to warrant modification to decrease impacts to biological resources. If recommended modifications to the proposed action are not acceptable to the responsible party, the proposed action and recommended modification will be reviewed by the City of San Diego for determination and DFG, COE, and USFWS for comment.

ATTACHMENT 1



RICK ENGINEERING COMPANY | PLANNING CONSULTANTS
AND CIVIL ENGINEERS
5620 FRIARS ROAD • SAN DIEGO, CALIF. 92110-2596
TELEPHONE 619-591-0707 • AREA CODE 619 • 291-0707

3 APRIL 1986

TO: PLANNING DEPARTMENT, CITY OF SAN DIEGO

FROM: DENNIS BOWLING, HEAD, WATER RESOURCES DIVISION, RICK
ENGINEERING

RE: HEC-2 RUN, WEST OF FASHION VALLEY ROAD

METHODOLOGY

A U. S. Army Corps of Engineers HEC-2 computer output has been prepared as part of the Levi-Cushman Specific Plan. Staff of the Water Resources Division are available to review the detailed computer output with City engineering personnel on request.

This HEC II computer run covers the portion of the San Diego River west of Fashion Valley Road, and includes both the 10-year storm (4,600 c.f.s.) and the 100-year storm (49,000 c.f.s.) events. The output results from combining three different HEC-2 input decks:

For sections 19008 through 21618, the City of San Diego's latest input deck (6/22/83) was used. This area, from approximately Colusa Street to the ocean, is west of proposed improvements within the Levi-Cushman property and covers land owned by Warner Ranch and the City of San Diego.

For sections 30 through 3900, a new input deck was digitized incorporating the channel improvements proposed within the project boundary of the Levi-Cushman Specific Plan dated March 1986. The area covered by sections 30 through 3900 runs from approximately Colusa Street to Fashion Valley Road.

For section 276.7 through 30483, input was from the latest Boyle Engineering run dated 9/05/85 which models a portion of the San Diego River upstream of Fashion Valley Road. This area adjoins the proposed LCSP improvements to the east and is owned by Fashion Valley Associates, which is comprised of Atlas Hotels and the Fashion Valley Shopping Center.

Two 100-year crossings and two weir sections have been included in this run. The 100-year crossings are incorporated at sections 800.1 through 800.4 (Street "A"), and sections 2701 through 2704 (Street "C"). The weirs were placed at sections 30 (Colusa Street) and 800.4 (Street "A"). The weir at Colusa Street has a minimum elevation of 11.0 feet while the weir at Street "A" has a minimum elevation of 13.0 feet and a maximum elevation of 17.5 feet. These two weir sections will provide a minimum water surface elevation upstream of each weir of 11.0 feet and 13.0 feet respectively. This constant water surface elevation provides natural habitat for plants and animals indigenous to the region.

Three islands are also included in the reach of the San Diego River between Street "A" and Fashion Valley Road and were included in the computer analysis. Two of these islands lie between Street "A" and Street "C", and the third is located between Street "C" and Fashion Valley Road.

The attached chart compares channel velocities ("Vel.") and calculated water surface elevations ("CWSEL") for the 100-year storm between the existing City of San Diego HEC-2 computer run and the LCSP proposed channel HEC-2 computer run. Along the bottom of the chart is a comparison of the water surface elevation at Fashion Valley Road for the proposed improvements and those of the Boyle Engineering run.

FINDINGS

1. Hydraulics necessary to establish channel geometry to accommodate Corps of Engineers flow requirements have been developed.
2. Channel design works for phased development of channel.
3. Area west of Street A river crossing is not protected in a 100 year storm, but it's a simple matter to do so. Preliminary assessment shows that protection can be made available at the time the parcels adjoining the channel are developed if pad elevation is raised. For example, a road constructed on the south side of the channel could serve as a dike.
4. A pilot channel is assumed in the area west of the project, at the point where Colusa Street, if extended, would cut across the River. The pilot channel is necessary only because of the construction of Camino de la Reina. If Camino de la Reina is not built west of Colusa, the pilot channel would not be necessary.

COMPARISON OF EXISTING AND PROPOSED WATER SURFACE ELEVATIONS
SAN DIEGO RIVER, WEST OF FASHION VALLEY ROAD
100-YEAR STORM

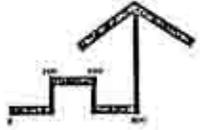
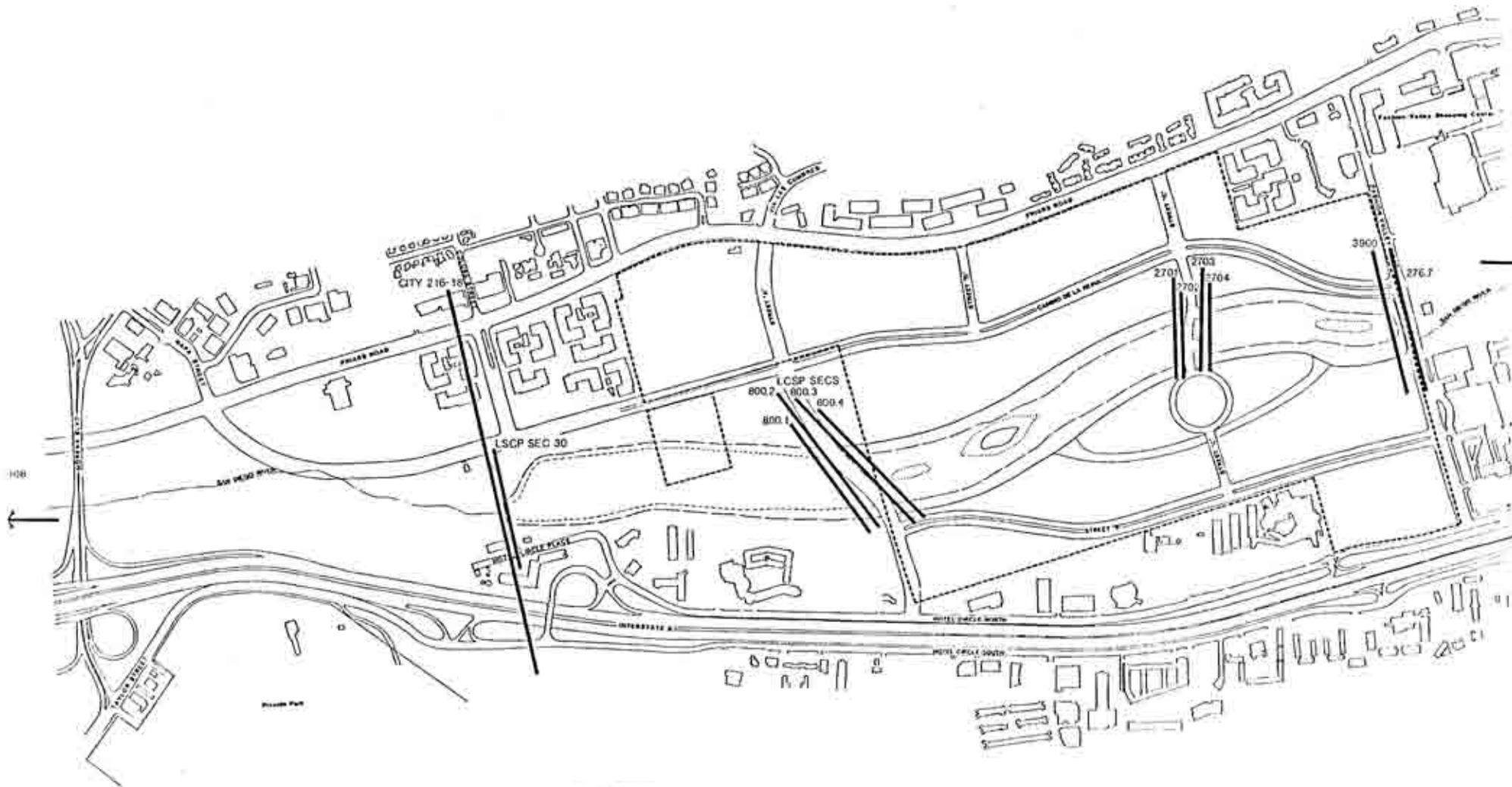
1) EXISTING CITY OF SAN DIEGO HEC-2 COMPUTER RUN DATED 6/22/83			PROPOSED CONDITION 3/20/86		
SECTION (Colusa Street)	VELOCITY	CWSEL	SECTION	VELOCITY	CWSEL
216+18	14.10	19.37	216+18	15.09	18.81
WEIR AT SECTION 30 SET AT ELEVATION 11.0 (Colusa Street)			30	14.76	20.10
			40	7.11	21.53
			50	6.43	21.73
223+03	12.61	21.57	---	---	---
			60	6.41	21.78
			70	6.55	21.80
			80	6.76	21.83
227+03	8.74	23.25	---	---	---
			90	7.13	21.83
			100	7.11	21.91
			200	6.93	22.01
230+93	8.77	23.80	---	---	---
			300	6.94	22.08
			400	6.90	22.15
234+03	7.07	24.62	500	7.20	22.16
			600	7.07	22.26
			700	7.04	22.32
100 YEAR CROSSING SECTIONS 800.1-800.4 (Street "A" Bridge)			800.1	7.00	22.38
			800.2	10.71	21.87
			800.3	10.61	22.00
WEIR AT ELEVATION 17.5 WITH NOTCH TO ELEV 13.0			800.4	15.90	24.89

2) FASHION VALLEY ROAD

EXISTING CITY RUN JUNE 22, 1983			EXISTING BOYLE RUN SEPTEMBER 5, 1985			PROPOSED RUN MARCH 20, 1986		
SEC.	VEL.	CWSEL	SEC.	VEL.	CWSEL	SEC.	VEL.	CWSEL
280+43	2.50	36.37	276.7	7.98	30.26	276.7	4.99	30.02

3) COMPARISON OF THE 10-YEAR STORM AT FASHION VALLEY ROAD

EXISTING BOYLE RUN			PROPOSED RUN		
SEC.	VEL.	CWSEL	SEC.	VEL.	CWSEL
276.7	3.15	23.26	276.7	9.31	19.21



* NOTE:
 SECTIONS 19008 AND 30483 ARE OFF OF THE MAP
 19008 IS NEAR OCEAN
 30483 IS NEAR HIGHWAY 163

V. DEFINITIONS

ACCESS - Potential locations for entry roads into a parcel as shown on the Parcel Summary Maps, IG Section III. The actual entry location will be determined at the PCD/PRD stage.

ADT - Average Daily Trips. In the LCSP, ADT are used to a) define the volume of traffic generated by particular land uses, and b) indicate the capacity of a street or street system to handle traffic.

BARRIER (VEGETATIVE BARRIER) - Within the RIVER BUFFER adjacent to the San Diego River, a physical barrier of vegetation must be maintained. See IG Section II F3. The barrier will incorporate native riparian species including thorny shrubs such as wild rose and blackberry to restrict access into the RIVER CHANNEL. The barrier will be no less than 5 feet wide and have an understory height no greater than 4 feet to allow visual access to the river. Trees planted within the barrier shall be located and maintained to permit a break in the plant overstory along at least 20 percent of the barrier. These breaks, intended to provide panoramic view areas, should occur at the terminus of view corridors and no individual break shall be greater than 50 linear feet. See SCREEN BREAK.

BIKEWAYS -

Bicycle Paths - Bicycle paths are two-way facilities separate from roadways. When designed exclusively for bicycles, paths shall have a width of eight feet with a two-foot shoulder on either side. A minimum eight-foot vertical clearance to obstructions shall be provided at the outside edge of the bike path. When a bicycle path is combined with a pedestrian path, it shall be ten feet wide with the two-foot horizontal and eight-foot vertical clearance required only on one side of the path. See Typical Designs Adjacent to the Buffer, LCSP Figure 3.4.

Bicycle Lanes - Bicycle lanes are striped or marked lanes in the roadway designated for preferential one-way use. Bicycle lanes shall be six feet wide.

Bicycle Routes - Bicycle routes are signed bikeways shared with pedestrian or motor vehicles with no specially marked lane. Widths of routes vary based on vehicular traffic and road conditions.

BUFFER/RIVER BUFFER - A minimum 25-foot wide area adjacent to both sides of the San Diego River will act to buffer the river from adjacent development. The buffer will always contain a 5-foot plant BARRIER to prevent direct access into the river and may contain a pedestrian and/or bike path.

landscaping, and passive recreational areas. Paved paths within the buffer may not be any wider than 10 feet.

CANAL - The CANAL is a waterway approximately 40 feet wide located on the south side of the island. The CANAL will be an artificial lake that visually connects but is physically separated from the river channel. Pedestrian bridges will connect Parcels B, C, P, and Q to the island. Pedestrian walkways (the RIVERWALK), retail stores, and restaurants will line either side of the canal.

DEVELOPMENT AREA - 1) One of three major divisions of the LCSP project area and the minimum unit for which discretionary development applications can be submitted. 2) That portion of a site on which structural development may occur. It is measured as the area within the gross parcel boundary less setbacks and rights-of-way.

FLOODWAY - The floodway includes those areas subject to flooding during a 100-year storm.

FLOODWAY TRANSITION AREA - A river overflow area where no permanent structural development is permitted unless mitigation is accomplished in compliance with the San Diego River Wetlands Management Plan. Floodway Transition Areas occur on Parcels C, H, and I.

HEIGHT ENVELOPE - Isometric drawings of height limits/requirements as provided on each Parcel Summary Maps in IG Section III. The effect of building heights sloping toward

the river is to visually maintain the valley character within the project and maximize views of the river from all parcels.

PEDESTRIAN NODES -

Major - Sites of large-scale, major pedestrian-oriented activity; locations where pedestrians gather, group and rest such as plazas, courtyards, etc. (See Figure LCSP 3.5).

Minor - Sites of small scale, minor pedestrian-oriented activity; locations where pedestrians gather, group and rest such as small parks, mini-plazas, etc. (See LCSP Figure 3.5).

PEDESTRIAN PATHS -

Primary - The principal element in the pedestrian network; to be 10 feet wide and located as illustrated in LCSP Figure 3.5. When combined with a bikeway in the BUFFER, the pedestrian/bike path shall be 10 feet wide with a two foot clear shoulder along the side used by cyclists.

Minor - The smallest link in the pedestrian path system which connects the least traveled areas into the pedestrian network. Minor pedestrian paths are to be 6 feet wide.

RIVER BUFFER - See BUFFER

RIVER CHANNEL/CORRIDOR - The river channel or river corridor is the water surface and the sides of the channel, including the slopes and areas of wetland habitat extending to

the top of the river banks. It does not include any portion of the buffer.

RIVERWALK - Public promenade located on both sides of the CANAL.

SCREEN BREAK - A visual break in the BUFFER vegetation adjacent to the river or in the perimeter screen plantings where an absence of overstory material permits expanded views into the river corridor. Occurs on no less than 20 percent of the river frontage at the terminus of view corridors and in no case is an individual break greater than 50 linear feet.

STEP-BACK - An architectural design in which upper floors of a building recede from lower floors, resulting in a step-like profile.

THEME ENTRIES -

Major - Wedge-shaped landscaped entries into the project that announce and enunciate the dominant themes and images of the development with fountains or pools as elements. It includes monumentation and is measured as a 120' radius from the corner where the entry is located.

Secondary - An intermediate size theme entry node that is landscaped and incorporates some water or monument features. Measured as a 90' radius from the corner where the entry is located.

Minor - The smallest of the theme entries into the project; it is landscaped and includes monumentation. Dimensions are measured as a radius of 45' from the corner where the entry is located.

THEME TOWER - Proposed for the center of the island, the theme tower would provide a focal point for the entire project.

TRANSITION ZONE - See FLOODWAY TRANSITION AREA.

TRANSPORTATION CENTER - The transportation center will be located at the intersections of Parcels F, G, J and K. Stops for the LRT, buses, intra-valley transit or shuttles, taxis, etc., are proposed, as are traveler-oriented services such as hotels, restaurants, ticket booths, etc.

VIEW CORRIDOR - Important sight lines which must be preserved to and from the RIVER CHANNEL and the island from pedestrian and vehicular levels (See LCSP Figure 3.7).